MASTER DEVELOPMENT DRAINAGE PLAN
FOR
FLYING HORSE

NOVEMBER 2002
REVISED DECEMBER 2003

PREPARED FOR:

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CLASSIC
CONSULTING
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DRAINAGE REPORT STATEMENT

ENGINEER'S STATEMENT:
The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the City for drainage reports and said report is in conformity with the master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors, or omissions on my part in preparing this report.

COLORADO REGISTERED KYLE R. CAMPBELL 29794 PROFESSIONAL ENGINEER

Kyle R. Campbell, Colorado P.E. #29794 — Date 1/2/04

DEVELOPER'S STATEMENT:
I, the developer, have read and will comply with all of the requirements specified in this drainage report and plan.

Business Name: Classic Communities

By: _____

Title: Vice President

Address: 6385 Corporate Drive

Colorado Springs, CO 80919

CITY OF COLORADO SPRINGS ONLY:
Filed in accordance with Section 15-3-906 of the Code of the City of Colorado Springs, 1980, as amended.

_____ — January 12, 2004
City Engineer — Date

Conditions:

CLASSIC CONSULTING ENGINEERS & SURVEYORS

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PURPOSE

This document is the Master Development Drainage Plan for Flying Horse. The purpose of this report is to identify on-site existing and developed drainage patterns, areas tributary to the site, and to indicate major facilities that will need to be constructed with the development of the proposed master plan.

GENERAL DESCRIPTION

Flying Horse is a 1565.255-acre site located in a portion of the east half and a portion of the southwest quarter of section 4; a portion of the southeast quarter of section 5; the east half of the northwest quarter and a portion of the east half of section 8; a portion of section 9; a portion of section 16; and a portion of the north half of the north half of section 21, township 12 south, range 66 west of the sixth principal meridian, County of El Paso, State of Colorado. The site is bounded on the north by North Gate Road, to the south and east by State Highway 83, and to the west by the Northgate Development. The site stretches across 4 existing drainage basins, the Monument Branch, Middle Tributary, Black Squirrel Creek, and the Elkhorn. Multiple proposed land uses including multi and single family residential, a golf course with conference center, office/industrial parcels, a mixed use village center, and open space are included in the proposed master plan for this site.

The average soil condition reflects Hydrologic Group "B" (Pring Coarse Sandy Loam, Peyton Pring Complex, and Tomah-Crowfoot Loamy Sand) as determined by the "Soil Survey of El Paso County Area," prepared by the Soil Conservation Service (see map in Appendix).

The presence of the Preble's Meadow Jumping Mouse and some wetlands within portions of the Flying Horse property has required coordination with the

Environmental Protection Agency, the U.S. Army Corps of Engineers, U.S. Fish and Wildlife and the Colorado Division of Wildlife. Also due to the proximity of the Air Force Academy and I-25 recommendations of the Air Force and CDOT were taken into account. These various agencies comments/requirements are discussed in more detail in this report.

EXISTING DRAINAGE CONDITIONS

Monument Branch

Flying Horse resides in the most northern half of the Monument Branch Drainage Basin. This basin is was previously studied by the URS Corporation in the approved Monument Branch Drainage Basin Planning Study dated August 6, 1987. The site currently drains south westerly across rolling hills and pasture with grades that range from 2%-10% into various existing drainage channels and gullies that start in the Flying Horse property and extend across I-25 into the Air Force Academy property and into Monument Creek. To the north of the existing North Gate Road are numerous low density properties that lie within the Monument Branch Drainage Basin that contribute flows across North Gate road via existing drainage structures that are inadequate to convey the full 100 year existing flows. These structures will be evaluated and recommendations will be provided within this report. The historic flows from the north are assumed to be "historic," and conveyance of those flows through the Flying Horse property is anticipated. If additional development would take place north of the existing North Gate Road alignment, they would be required to detain to "existing" discharge conditions. The existing channels within the Monument Branch Drainage Basin within the Flying Horse Property are fairly wide and shallow with some channels having steep side slopes. Vegetation within these channels consists of natural grasses and shrubs. Erosion from historic flows does not appear to be affecting the various channel features. Downstream facilities (i.e. Voyager Parkway culvert crossing) are adequately designed to accept historic flows from the Flying Horse property.

Middle Tributary

Flying Horse is located at the top of the Middle Tributary Drainage Basin. This Basin has been previously studied by the URS Corporation in the approved Drainage Basin Planning Study dated August 6, 1987. Drainage from this basin currently crosses in a southwesterly direction across 2-10% slopes via natural channels through the Northgate development, across I-25 to Monument Creek.

Black Squirrel Creek

The Flying Horse property is located at the bottom of the Black Squirrel Creek Drainage Basin, which stretches from the Black Forest, across Hwy. 83 and into the Air Force Academy property. Currently there are corrugated metal culverts within Hwy. 83 to convey flows across the existing roadway. These culverts are inadequately sized to handle the 100-year design flow and will have to be re-evaluated upon improvements to Hwy 83. At this time the Colorado Department of Transportation's proposed Powers Boulevard interchange improvements to Hwy 83 will require the improvement of these drainage facilities. This Basin has been previously studied by the URS Corporation in the approved Drainage Basin Planning Study for the Black Squirrel Creek Drainage Basin. Grading across the site vary from 2%-33%. The historic flows from Flying Horse currently drain directly into Black Squirrel Creek, with a portion of the site draining to an existing sediment pond located at the end of Ridgeline drive. This temporary pond was constructed as part of the Deer Creek at Northgate Filing No. 1 development and is included in the final drainage report for Deer Creek. This temporary pond drains into an existing 48" RCP storm stub for future extension into the Flying Horse property. Per the Final Drainage report prepared and approved for the Deer Creek at Northgate Filing No. 1 development, an allowable discharge of (Q_5= 64cfs, Q_{100}=185cfs) is anticipated to release into the existing 48" RCP storm sewer stub from the Flying Horse Property upon final development.

PROPOSED DRAINAGE CONDITIONS

Monument Branch (North of proposed Powers Blvd.)

As part of the Flying Horse Master Plan, Powers Blvd. is proposed to bisect the property as well as the Monument Branch Drainage Basin. Powers Blvd was used as a boundary for the two regional ponds proposed by the DBPS. One pond is located north of the proposed Powers Blvd alignment, and one is locate south of the alignment. Per the proposed Master Plan, land uses within the north half of the Monument Branch Drainage basin include low density residential, parks, a portion of the proposed golf course, a school campus, community commercial, office/industrial and a dense village area. Flows for the land uses were calculated using the SCS method and are conceptual only. Upon development of the individual Master Plan components, a Preliminary/Final Drainage Report will be required utilizing the Rational Method per the City/County Drainage Criteria Manual. There are some portions of the Monument Branch within the Flying Horse Property that have been identified by the Corps of Engineers as Jurisdictional Waters including wetland areas. These areas will require a permit from the Corps in order to discharge fill or dredged material into these waters. See the wetlands exhibit in the appendix delineating those wetland areas that are of concern to the Corps.

Release from the Flying Horse property was taken into account in the development of the Northgate development, which will receive the majority of the release from the property. Thus the downstream facilities were sized for conveyance of these flows from the Flying Horse property in the Monument Branch Drainage Basin.

Parcel 7 (Q_5= 34cfs, Q_{100}=117cfs) contains 71 acres and is a proposed single-family residential area with 2-3.5 DU/AC with associated streets, lots, and structures. Flows from this area are assumed to be in the form of street flow and the ultimate onsite storm system required to convey the developed flows. A 48" storm system (Pipe 5) is estimated to handle the total outfall from this parcel. Additional flows from DBPS Basin A (Q_5= 23cfs, Q_{100}=89cfs) will cross into Parcel 7 via a 42" storm

crossing. The flows from Basin A area assumed to remain at existing levels as calculated in this report. Any increase in flows due to future re-development of Basin A will require detention facilities to maintain existing levels. A 42" storm crossing (Pipe 4) will be required to convey the existing northerly flows to the south side of Northgate Road. The DBPS identified a 5'x5' concrete box culvert for this crossing, but our assessment of this basin does not support the larger size. As identified in the DBPS, all existing inadequate crossings under Northgate Road will be upsized when improvements to Northgate Road take place. The required outfall structure for combined flows from Parcel 7 and Basin A is a 60" storm system (Pipe 6).

Parcel 9 (Q_5= 40cfs, Q_{100}=136cfs) contains 82 acres and is a proposed single-family residential area with 2-3.5 DU/AC with associated streets, lots, and structures. Flows from this area are assumed to be in the form of street flow and the ultimate onsite storm system required to convey the developed flows. A 48" storm system (Pipe 11) is estimated to handle the total outfall from this parcel. Additional flows from a portion of DBPS Basin E (Q_5= 23cfs, Q_{100}=88cfs) will cross into Parcel 9 via a 42" storm crossing. The flows from Basin E area assumed to remain at existing levels as calculated in this report. Any increase in flows due to future re-development of Basin E will require detention facilities to maintain existing levels. A 42" storm crossing will be required to convey the existing northerly flows to the south side of Northgate Road. The DBPS identified a 6'x5' concrete box culvert for this crossing, but our assessment of this basin does not support the larger size. As identified in the DBPS, all existing inadequate crossings under Northgate Road will be upsized when improvements to Northgate Road take place. The required outfall structure for combined flows from Parcel 9 and Basin E is a 66" storm system (Pipe 12).

Parcel 27 (Q_5= 150cfs, Q_{100}=293cfs) contains 80 acres and is a proposed school site. This site is proposed to be a multi-facility school campus with associated parking,

buildings, and play fields. It is proposed that this parcel will have onsite private detention, and only release historic flows from the detention facility into the proposed system in North Gate Road. Parcel 27 has a historic runoff of (Q_5= 40cfs, Q_{100}=179cfs). This parcel, fully developed as a school campus, would require 12 ac-ft of storage in order to release at historic conditions. Additional flows from a portion of DBPS Basin E (Q_5= 23cfs, Q_{100}=88cfs) will cross into Parcel 27 via a 42" storm crossing. The flows from Basin E area assumed to remain at existing levels as calculated in this report. Any increase in flows due to future development of Basin E will require detention facilities to maintain existing levels. A 42" storm crossing will be required to convey the existing northerly flows to the south side of Northgate Road. The DBPS identified a 6'x5' concrete box culvert for this crossing, but our assessment of this basin does not support the larger size. As identified in the DBPS, all existing inadequate crossings under Northgate Road will be upsized when improvements to Northgate Road take place.

Parcel 34 (Q_5= 1cfs, Q_{100}=4cfs) contains 5 acres and is a proposed neighborhood park site with associated landscaping. This site will require an 18" outfall (Pipe 8).

Parcel 21 (Q_5= 36cfs, Q_{100}=64cfs) contains 16 acres and is a proposed community commercial site with associated buildings, parking, and streets. This parcel will require a 36" storm system (Pipe 1).

Parcel 20 (Q_5= 26cfs, Q_{100}=48cfs) contains 11 acres and is a proposed community commercial site with associated buildings, parking, and streets. This parcel will require a 36" storm system (Pipe 2).

Parcel 11 (Q_5= 13cfs, Q_{100}= 35cfs) contains 16 acres and is a proposed residential site with 3.5-8 DU/AC. This site will have associated streets and landscaping. Developed flows from this site will be conveyed to the proposed detention facility #2 by a 30" storm system (Pipe 30).

Parcel 12 (Q_5= 10cfs, Q_{100}=26cfs) is 12 acres of Residential space with 3.5-8 DU/AC. Developed flows from this area are from associated streets, landscaping and structures. Flows will be collected and routed by an outfall of 30" (Pipe 35), and be routed to detention facility #2.

The east portion of Parcel 2 (Q_5= 10cfs, Q_{100}=34cfs) contains the remaining 20.50 acres of the proposed residential 2-3.5 DU/AC parcel. The flows from this parcel will be collected and routed to detention facility #2 by a proposed 30" storm outfall (Pipe 31).

As previously reported northeast portion of Parcel 30 (Q_5= 6cfs, Q_{100}=42cfs) contains the remaining 51 acres of the north golf course and 3 acres of golf course maintenance area. Flows from these sites will be minimized due to the nature of the landscaping required for a golf course. A 30" storm system will be required to outfall this area of the golf course into detention facility #2.

Parcel 24 (Q_5=56cfs, Q_{100}=110cfs) contains 30 acres of Office/Industrial space with streets, parking, and structures. Developed flows from this area will require a 48" storm outfall (Pipe 36) and be routed to detention facility #2. Parcel 24 also contains regional detention facility #2. This detention facility will collect all the flows from the northeast corner of the Monument Branch Drainage Basin in the proposed Office area north of the proposed alignment of Powers Blvd. and west of Hwy. 83

Parcel 25 (Q_5= 114cfs, Q_{100}=233cfs) contains 67 acres of Village space with streets, parking, and structures and a park included in Parcel 15. This parcel will require a 60" storm outfall (Pipe 37) into the proposed detention facility #2.

Parcel 32 (Q_5= 169cfs, Q_{100}=305cfs) contains 76 acres and is a proposed village area with associated streets, buildings and parking. This is dense area with 10 DU/AC. Flows from this site are to be collected by a 66" storm system (Pipe 23).

Parcel 35 (Q_5= 1cfs, Q_{100}=2cfs) contains 3 acres and is a proposed park site for the village center in parcel 32. This site will have associated landscaping and will tie into the 66"storm system for parcel 32 via an 18" outfall (Pipe 22).

Parcel 6 (Q_5= 16cfs, Q_{100}=55cfs) contains 33 acres and is designated per the master plan as a proposed residential site with 2-3.5 DU/AC. The flows from this area are assumed to be generated by associated street flow, structures, and landscaping. A 36" storm system (Pipe 17) is proposed for this area.

The west portion of Parcel 2 (Q_5= 7cfs, Q_{100}=24cfs) contains 14.50 acres and is designated per the master plan as a proposed residential site with 2-3.5 DU/AC. Flows from the west half of Parcel 2 will be collected via a proposed 30" storm system (Pipe 25). The east portion of Parcel 2 will be discussed in the South Monument Branch text.

The northwest portion of Parcel 30 (Q_5= 3cfs, Q_{100}= 22cfs) contains a portion of the proposed golf course north of the proposed Powers Blvd. alignment. The area is 30 acres located northwest of the proposed Powers Blvd. Flows from this site will be minimized due to the nature of the landscaping required for a golf course. The channel that runs through the proposed area could be left natural to accept the developed flows from the golf course area only and be routed to an underground system located in future adjacent roadways. If construction of the golf course does not warrant the natural channel in this area, a 24" storm system will have to be installed to outfall these developed flows from the north portion of the golf course.

The west portion of Parcel 22 (Q_5= 66cfs, Q_{100}= 120cfs) contains 27.50 acres and is proposed as an office site with associated streets, parking, and structures. Flows generated from this parcel will be collected by a 48" system (Pipe 27).

The east portion of Parcel 22 (Q_5= 14cfs, Q_{100}= 26cfs) contains 6.5 acres and is proposed as an office site with associated streets, parking, and structures. Flows generated from this parcel will be collected by a 30" system and routed to proposed Detention Facility No. 2

Parcel 19 (Q_5= 19cfs, Q_{100}= 35cfs) contains 8 acres and will be a regional commercial site with parking, streets, and buildings. A 30" system (Pipe 20) will outfall this Parcel.

Parcel 26 (Q_5= 154cfs, Q_{100}=301cfs) contains 82 acres and per the proposed master plan this site will be Office / Industrial. Flows from this site will be generated from streets, parking, and structures and the ultimate onsite storm system required to convey the developed flows. This site will also contain Regional Detention Facility # 1. At this discharge point, the Monument Branch Drainage Basin north of the proposed Powers Blvd. alignment through the Flying Horse property outfalls. Additional flows from a DBPS Basin I (Q_5= 32cfs, Q_{100}=124cfs) will cross into Parcel 26 via 48" storm crossings at Northgate Road at two different locations. The flows from Basin I area assumed to remain at existing levels as calculated in this report. Any increase in flows due to future re-development of Basin I will require detention facilities to maintain existing levels. The proposed 48"and 42" storm crossings will be required to convey the existing northerly flows to the south side of Northgate Road. The DBPS identified a 6'x5' concrete box culvert and a 48" RCP for these crossings, but our assessment of this basin does not support the larger size. As identified in the DBPS, all existing inadequate crossings under Northgate Road will be upsized when improvements to Northgate Road take place.

Basin PWRS-1 (Q_5= 28cfs, Q_{100}=46cfs) contains 9.5 acres of proposed Powers Blvd. Asphalt surface and ROW. These developed flows will travel to the proposed Detention Facility No. 1. A 36" storm system will convey these developed flows.

Reach 1 (Q_5= 558cfs, Q_{100}=1397cfs) is a proposed lined channel. This is an existing channel with historic flows of (Q_5= 140cfs, Q_{100}=722cfs) This channel will have to be improved in order to handle developed flows. Recommendations include re-alignment, riprap bank protection, drop and check structures or possibly a box culvert dependant upon the final layout and use of the site.

Monument Branch (South of proposed Powers Blvd.)

Per the proposed Master Plan, land uses within the south half of the Monument Branch Drainage basin include low density residential, a portion of the proposed golf course, a conference center, community commercial, and office/industrial. Flows for the land uses were calculated using the SCS method and are conceptual only. Upon development of the individual Master Plan components, a Preliminary/Final Drainage Report will be required utilizing the Rational Method per the City/County Drainage Criteria Manual. As mentioned earlier, the proposed Powers Blvd. alignment is to be used and a division line for the Monument Branch Drainage Basin and its proposed regional detention facilities. That being the case, CCES has opted to divide the proposed single detention facility proposed by the approved DBPS for the south major basin in the Monument Branch into two facilities. Each will retain the developed flows to historic levels. Regional facility #2 is located on the Northeast side of the proposed Powers Blvd. extension, and regional facility #3 is located southwest of the proposed Powers Blvd. extension in the same location as presented in the DBPS. There are some portions of the Monument Branch within the Flying Horse Property that have been identified by the Corps of Engineers as Jurisdictional Waters including wetland areas. These areas will require a permit from the Corps in order to discharge fill or dredged material into these waters. See

the wetlands exhibit in the appendix delineating those wetland areas that are of concern to the Corps of Engineers.

Release from the Flying Horse property was taken into account in the development of the Northgate development, which will receive the majority of the release from the property. Thus the downstream facilities were sized for conveyance of these flows from the Flying Horse property in the Monument Branch Drainage Basin.

Parcel 18 (Q_5= 14cfs, Q_{100}=38cfs), contains 15 acres of Residential space with developed flows from associated streets, landscaping, and structures. Flows will be intercepted by a 30" storm system (Pipe 39) and be routed to detention facility #3.

Parcel 31 (Q_5= 38cfs, Q_{100}=73cfs) is 20 acres of Conference Center space as a part of the proposed golf course. Flows from this area are developed from associated parking, streets, landscaping, and structures. These flows will be accepted by a 42" storm system (Pipe 40) with the possibility of historic release into the existing natural channel that runs through the golf course for water feature purposes.

Parcel 30 South (Q_5= 12cfs, Q_{100}=84cfs) contains 113 acres and per the Master Plan, this area is part of the proposed golf course. Flow will be minimized due to the nature of the landscaping for a golf course. Flows from this area will be routed through the existing natural channel that will outfall into the proposed detention facility #3. The only flows allowed in the natural channel will be flows from the golf area, as well as the historic flows from detention facility #2 located in the office area to the east.

Parcel 16 (Q_5= 13cfs, Q_{100}=27cfs) is 9 acres of Residential space with 3.5-8 DU/AC. Developed flows from this area are from associated streets, landscaping and structures. Flows will be collected and routed by an outfall of 30" (Pipe 44), and be routed to detention facility #3.

Parcel 8 (Q_5= 26cfs, Q_{100}=89cfs) contains 54 acres of Residential space with 2-3.5 DU/AC. Flows will be developed from streets, landscaping, and individual home sites. Flow will be collected and routed to detention facility #3 by a 42" storm system. Site grading will take place to ensure flows reach detention facility # 3

North portion of Parcel 1 (Q_5= 26cfs, Q_{100}=89cfs) consists of 53 acres of the overall total acreage of proposed Residential with 2 DU/AC. Flows developed from streets, landscaping, and individual home sites will be collected and routed to detention facility #3 by a 42" storm system (Pipe 42). South half of Parcel 1 is in the Middle Creek Drainage Basin.

Basin PWRS-1 (Q_5 = 28 cfs, Q_{100} = 46 cfs) contains 9.5 acres of proposed Powers Boulevard asphalt surface and right-of-way. These developed flows are comprised of the most westerly portions of Powers Boulevard within the Flying Horse development area. This basin is located between Parcel 26 and Parcel 8. All developed flows from this portion of Powers Boulevard will be directed into Detention Pond 1.

Basin PWRS-2 (Q_5= 44cfs, Q_{100}=73cfs) contains 15 acres of proposed Powers Blvd. Asphalt surface and ROW. These flows are developed from that portion of Powers Boulevard between Parcel 22 and Parcel 16.

Basin PWRS-3 (Q_5= 33cfs, Q_{100}=54cfs) contains 11 acres of proposed Powers Blvd. Asphalt surface and ROW. These flows are developed from that portion of Powers between Parcel 18 and Parcel 25. The combined flows from PWRS–2 and PWRS–3 will be released into the existing natural golf course channel near Pipe Run 38. A stormwater quality feature will be installed at the outlet of the Powers flows.

Reach 2 (Q_5= 37cfs, Q_{100}=184cfs) is an existing channel. This channel is proposed to be left natural as a feature of the proposed golf course per the Master Plan. Historic flows of (Q_5= 16cfs, Q_{100}=109cfs) will need to be maintained. The addition of water features along this channel will help to reduce released flows into the channel. These features were not included in this initial calculation due to the preliminary nature of the golf course layout. Upon final design, these features will be taken into account and historic values will be maintained. This reach contains wetland areas that according to the U.S. are jurisdictional waters and a 404 permit may be required in order to disturb this area.

Reach 3 (Q_5= 73cfs, Q_{100}=138cfs) is an existing channel. This channel is proposed to be left natural as a feature of the proposed golf course per the Master Plan. Historic flows of (Q_5= 15cfs, Q_{100}=105cfs) will need to be maintained. The addition of water features along this channel will help to reduce released flows into the channel. These features were not included in this initial calculation due to the preliminary nature of the golf course layout. Upon final design, these features will be taken into account and historic values will be maintained. This reach contains wetland areas that according to the U.S. are jurisdictional waters and a 404 permit may be required in order to disturb this area.

Reach 4 (Q_5= 84cfs, Q_{100}=242cfs) begins at the confluence of Reach's 2 & 3. This channel is proposed to be left natural as a feature of the proposed golf course per the Master Plan. Historic flows of (Q_5= 31cfs, Q_{100}=213cfs) will need to be maintained. The addition of water features along this channel will help to reduce released flows into the channel. These features were not included in this initial calculation due to the preliminary nature of the golf course layout. Upon final design, these features will be taken into account and historic values will be maintained. This reach contains wetland areas that according to the U.S. are jurisdictional waters and a 404 permit may be required in order to disturb this area.

Existing Monument Branch DBPS Overview

In general, the drainage facilities and conveyance of flows to the west has remained the same. Two areas are proposed to be modified creating one detention facility instead of the DBPS recommended two. This is proposed in order to help minimize downstream storm infrastructure size as well as be able to maintain some form of natural channel through the golf course and possibly the northwest Parcel 27. Several of the reaches described in the DBPS that were anticipated to be open channels are now proposed to be constructed in culverts in order to maximize land use. Overall, the intent of the DBPS is being met with the proposed Flying Horse System.

Middle Tributary Drainage Basin

Developed areas within the Middle Tributary Drainage Basin were accounted for in the Master Development Drainage Plan for the adjacent Estates at Middle Creek prepared by JR Engineering approved June 2001. Flows from the Flying Horse area that are included in the Middle Tributary Drainage Basin will be collected by a future storm sewer system and discharge directly into the Middle Tributary Channel located within the Estates property, where online detention water features located within the Estates at Middle Creek will handle these developed flows. Another portion of the Flying Horse property (a portion of Parcel 4) that is located within the basin, will discharge into an existing riprap lined channel constructed by the City of Colorado Springs for the existing water tank adjacent to the site. These flows will be carried by a lined trapezoidal channel constructed by the Estates at Middle Creek to handle not only the developed flows from Flying horse, but developed flows from the tank site, and the Estates at Middle Creek itself.

Release from the Flying Horse property was taken into account in the development of the Estates at Middle Creek development, which will receive the majority of the release from the property. Thus the downstream facilities were sized for conveyance

of these flows from the Flying Horse property in the Middle Tributary Drainage Basin.

South portion of Parcel 1 (Q_5= 14cfs, Q_{100}=49cfs) contains the remaining 29.0 acres of Residential with 2 DU/AC. Flows from this area will be routed by a 42" storm system (Pipe 51) and eventually outfall into the Middle Tributary Channel into the Estates at Middle Creek.

North portion of Parcel 5 (Q_5= 19cfs, Q_{100}=66cfs) contains 40.0 acres of Residential with 2-3.5 DU/AC. Flows from this area will be routed by a 36" storm system (Pipe 48) and will combine with flows from Parcel 1 and outfall into the Middle Tributary Channel into the Estates property.

North portion of Parcel 33 (Q_5= 1cfs, Q_{100}=3cfs) contains 4.0 acres of proposed Neighborhood Park, per the proposed Master Plan. This area will have associated landscaping, which will minimize flows from this site. An 18" storm system (Pipe 47) will be required to outfall this area.

North portion of Parcel 4 (Q_5= 21cfs, Q_{100}=70cfs) and contains 42.50 of Residential 2-3.5 DU/AC. Developed flows from this area will be from associated streets, landscaping, and individual lots. Flows will be routed by a 36" storm system (Pipe 50) and outfall into the existing rip-rap lined channel located adjacent to the property where flows will enter an existing trapezoidal channel constructed with the Estates at Middle Creek for the purpose of convey these as well as other flows.

Black Squirrel Creek Drainage Basin

Flying Horse is located at the bottom southwesterly portion of the Black Squirrel Creek Drainage Basin. Per the proposed Master Plan, this area is to include low density residential, parks, office/industrial, multi-family areas, and open space. Flows for the land uses were calculated using the SCS method and are conceptual

only. Upon development of the individual Master Plan components, a Preliminary/Final Drainage Report will be required utilizing the Rational Method per the City/County Drainage Criteria Manual. This basin has been previously studied by the URS Corporation in the Drainage Basin Planning Study for Black Squirrel Creek Drainage Basin approved December 1988. The portions of the Black Squirrel Creek that are within the Flying Horse Property have been identified by the Corps of Engineers as Jurisdictional Waters including wetland areas, see appendix for wetland exhibit. These areas will require a permit from the Corps in order to discharge fill or dredged material into these waters. The Prebles Jumping Mouse has also been identified within the area of Black Squirrel Creek that crosses the Flying Horse property. A 300' no build mouse line will be established around the creek area in order not to disturb the habitat or appropriate permits from the USFWS will be obtained. On going coordination with USFWS is taking place to quantify limits of disturbance and outfall points.

CCES respectfully requests that due to the nature of the land use per the proposed Master Plan surrounding the Black Squirrel Creek being designated as open space, including the Prebles Jumping Mouse habitat, a detailed study of a prudent line versus stabilization be conducted upon development of the surrounding land uses in the area. An update to the current DBPS will be required. Release from the Flying Horse property was taken into account in the development of the Northgate development, which will receive the majority of the release from the property. Thus the downstream facilities were sized for conveyance of these flows from the Flying Horse property in the Black Squirrel Drainage Basin.

Release from the Flying Horse property was taken into account in the development of the Northgate development, which will receive the majority of the release from the property. Thus the downstream facilities were sized for conveyance of these flows from the Flying Horse property in the Black Squirrel Creek Drainage Basin.

South portion of Parcel 5 (Q_5= 16cfs, Q_{100}=54cfs) contains the remaining 33.0 acres of Residential space with 2-3.5 DU/AC located within Parcel 5 located west of the propose Powers Blvd. alignment. Flows from this area will require a 36" storm outfall (Pipe 54) and will be routed to the 48" RCP storm sewer stub constructed with the development of Deer Creek Filing No. 1.

South portion of Parcel 33 (Q_5= 1cfs, Q_{100}=5cfs) contains the remaining 6.0 acres of the proposed Neighborhood Park located within Parcel 5. Developed flows from this site will be collected by an 18" system and routed to the 48" outfall provided with the construction of Deer Creek.

South portion of Parcel 4 (Q_5= 13cfs, Q_{100}=46cfs) contains the remaining 27.50 acres of Residential space per the proposed Master Plan with 2-3.5 DU/AC. Developed flows from this area will be collected by a 36" storm system (Pipe 56) and outfall into the 48" RCP storm sewer stub.

East portion of Parcel 3 (Q_5= 15cfs, Q_{100}=51cfs) contains 31 acres of Residential area with 2-3.5 DU/AC. Developed flows from this area will require a 36" storm outfall (Pipe 58) that will contribute to the 48" RCP storm sewer stub located in Ridgeline Drive.

West portion of Parcel 3 (Q_5= 9cfs, Q_{100}=31cfs) contains the remaining 19.0 acres of Residential area located within Parcel 3 per the proposed Master Plan. These flows will be collected by a 30" storm system (Pipe 61) and be routed to proposed detention facility #4 located south of Deer Creek.

Parcel 29 north (Q_5= 3cfs, Q_{100}=24cfs) and Parcel 29 south (Q_5= 4cfs, Q_{100}=30cfs) are open space tracts located around Black Squirrel Creek. This open space encompasses the 300-foot mouse line established by CCES. This area will continue to contribute only historic flows to Black Squirrel Creek and will be left undisturbed.

Parcel 10 (Q_5= 15cfs, Q_{100}=41cfs) contains 19 acres of Residential space with 3.5-8 DU/AC per the proposed Master Plan. Flows from this area will be collected by a 36" storm system and be allowed to discharge directly into Black Squirrel Creek. Detention facility #4 will over-detain flows in so as not to exceed historic release into Black Squirrel Creek.

Parcel 28 (Q_5= 4cfs, Q_{100}=26cfs) is designated as a Community Park per the Master Plan, 18 acres. Any impervious development of the park site will require a private on-site detention facility that will release flows west along their historic path. The remainder of Parcel 28 is included in the Misc. Elkhorn Basin.

Parcel 14 (Q_5= 9cfs, Q_{100}= 35cfs) contains 7 acres of Multi-Family space located along Hwy 83. This site is assumed to have onsite private detention in order to release only existing flows into Black Squirrel Creek.

Parcel 23 (Q_5= 103cfs, Q_{100}=202cfs) contains 62 acres of Residential area with 2-3.5 DU/AC. Developed flows from this area will require a 54" storm outfall (Pipe 60) that will discharge into proposed Detention Facility No. 4.

Basin PWRS-4 (Q_5= 44cfs, Q_{100}=73cfs) contains 15 acres of proposed Powers Blvd. Asphalt surface and ROW. These developed flows will travel to the proposed Detention Facility No. 4. A 42" storm system will convey these developed flows.

Reach 5 (Q_5= 4cfs, Q_{100}=24cfs) and Reach 6 (Q_5= 8cfs, Q_{100}=51cfs) are portions of the Black Squirrel Creek that crosses the Flying Horse property. This reach starts at the existing Hwy. 83 crossing and ends at Parcel 29 South. Historic flows of (Q_5= 21cfs, Q_{100}=146cfs) are calculated for this portion. These flows are only flows that are contributed by the portion of the Flying Horse that contribute flows to the Black Squirrel Creek. This reach is located near the end of the Black Squirrel Creek thus

existing flows within the Black Squirrel Creek are significantly larger that the minor flows contributed by the Flying Horse property. Per the approved DPBS existing flows at this location are (Q_5= 1142cfs, Q_{100}=4220cfs). This reach contains wetland areas that according to the U.S. are jurisdictional waters and a 404 permit may be required in order to disturb this area.

Misc. Elkhorn Drainage Basin

The portion of the Flying Horse property that resides in Elkhorn Drainage Basin is located in the most northern part of said basin. This Basin has been studied by Kiowa Engineering Corporation in the Master Development Drainage Plan Update Fairlane Technological Park, approved February 2001.

Parcel 13 (Q_5= 23cfs, Q_{100}=47cfs) and Parcel 17 (Q_5= 111cfs, Q_{100}=200cfs) will require private onsite detention in order to release historic values into the existing roadside channel along Hwy. 83.

Portion of Parcel 28 (Q_5= 1cfs, Q_{100}=5cfs) is designated as a Community Park per the Master Plan. Any impervious development of the park site will require a private on-site detention facility that will release flows east along their historic path.

Parcel 17 (Q_5= 111cfs, Q_{100}=200cfs) contains 46 acres of Regional Commercial space with streets, parking, structures and ROW for the Powers/Hwy 83 interchange. This parcel will require private onsite detention in order to release historic values into the existing roadside channel along Hwy. 83.

DETENTION FACILITIES

Per the various DBPS's that include the Flying Horse property, there are multiple detention facilities that are required in order to release the historic 2, 5, 10, 50 and 100-year historic values based upon Air Force Academy requirements. This

stringent release rate must be maintained in order to maintain storm runoff at or below historic levels at the Air Force Academy boundary and so that the capacities of the existing Colorado Department of Transportation structures at Interstate 25 are not exceeded.

Pond sizes and flows calculated by CCES (historic and developed) vary from the DBPS's. CCES accounts for these variations due to the change in assumed land uses by the DBPS, and the use of more realistic time of concentration's for the land uses included in the proposed Master Plan. CCES proposes to amend the approved DBPS's to account for the change in land use and update the time of concentration values to reflect its findings per this MDDP.

Final design of these recommended facilities that include planning for water quality management of storm water runoff features will be designed during final design and construction of the proposed improvements. Storm water quality measures will be utilized in order to reduce the amount of sediment, debris and pollutants that are allowed to enter Monument Creek. These features include but are not limited to Extended Detention Basin Sedimentation Facilities, Sand Filter Extended Detention Basins, and Constructed Wetlands Basin Sedimentation Facilities. These measures will be taken into consideration upon final design of the individual detention facilities as well as the development of the individual land uses within the Flying Horse property. At this time it is proposed that all storm water quality features will be included in the regional detention facilities and that no site-specific features will be required. The only Flying Horse areas tributary to existing detention facilities are the upstream areas of the Middle Creek Basin and the area north of existing Deer Creek Tributary to the Northgate Business Park Detention Facility. All of these tributary areas are proposed to be a single-family detached development that is not required to have stormwater quality facilities.

The school site will be required to detain all developed flows and only release historic flows into the proposed storm facilities for the Flying Horse property. This detention facility will be evaluated in detail in a separate Final Drainage report that will be required for development of the school parcel.

Detention Facility #1 (Q_5= 516cfs, Q_{100}=1240cfs) is a 43 acre-ft public facility located in the Monument Branch Drainage Basin, north of the proposed Powers Blvd. alignment. This detention facility is required per the Monument Branch Drainage Basin Planning Study. Per the Planning study this facility was to receive a total peak flow of 2008 cfs 100 year with a historic release of 1290cfs and a size of 39.9 acre-ft. According to CCES the peak inflow is 1231 cfs 100 year and a release of 734 cfs historic 100 year and the required pond size is 43 acre-ft. This pond will be online and release directly into the Monument Branch drainage channel. The final design of the outlet structure will adhere to the release historic release rates stated earlier to satisfy the requirements of the Air Force Academy and the existing structures within Interstate 25.

Detention Facility #2 (Q_5= 202cfs, Q_{100}=456cfs) is a 16 acre-ft public facility located in the Monument Branch Drainage Basin, north east of the proposed Powers Blvd. alignment. This pond is not required per the DBPS, but CCES proposed this pond due to the alignment of Powers acting as a sub-basin boundary for the Monument Branch Drainage Basin. This pond will release only historic values into the upper portion of Reach 2 (Q_5= 16cfs, Q_{100}=109cfs), via a 48" storm system (Pipe 38) and will contribute to proposed detention facility #3, which is required per the DBPS. Release from this facility will cross the proposed Powers Blvd. via a culvert crossing that will be evaluated with the construction Powers. These flows will then be carried in the existing channel crossing the proposed Golf Course.

Detention Facility #3 (Q_5= 115cfs, Q_{100}=361cfs) is a 20 ac-ft public facility located in the Monument Branch Drainage Basin, south of the proposed Powers Blvd.

alignment. This pond is required per the DBPS in order to reduce flows released into Monument Creek. Per the DBPS this pond was to receive a peak 100-year flow of 1384 cfs with a peak release of 755 cfs and a size of 30.4 ac-ft. According to the calculations performed by CCES this pond is sized at 20 ac-ft, with a peak inflow of 439.23 cfs and a peak outflow of 273 cfs. Due to the fact that CCES has added a second pond area upstream, the land use variation, and the adjusted time of concentration values, the calculations performed by CCES differ from the pond size described in the DBPS for the Monument Branch Drainage Basin. Upon final design, this pond may be reduced due to the placement of various decorative water features that may be placed online within the golf course area of Parcel 30. Outlet structures for Detention Facility #3 will be designed to adhere to the standards mentioned earlier in order to release only historic flows into Monument Creek and the Air Force Academy property.

Detention Facility #4 (Q_5= 38cfs, Q_{100}=130cfs) is a 5 ac-ft facility located south of the Deer Creek at Northgate Filing No. 1 development. This facility is required per the DBPS for the Black Squirrel Creek Drainage Basin. Per the DBPS this facility was to receive a peak 100-year inflow of 233cfs with a peak outflow of 106 cfs with a size of 7 ac-ft. Per CCES, this facility is calculated to have a peak 100-year inflow of 130 cfs with a peak outflow of 112 cfs and a size of 5 ac-ft. This facility could possibly be located north of its proposed location within the Neilson property if acquired by Classic Homes for future development. This facility will over-detain flows in order to allow Parcel's 10 and 28 to release developed flows directly into the Black Squirrel Creek. Upon final design, the outlet structures in conjunction with the direct release of flows from Parcel's 10 and 28 will maintain the historic release rate for the area.

Possible Detention Facility #5 (Q_5= 36cfs, Q_{100}=127cfs) is a facility that is required per the DBPS for the Black Squirrel Creek Drainage Basin. This facility will be located north of the existing Deer Creek at Northgate Filing No. 1 development.

This facility, per the DBPS, was to receive a peak 100-year inflow of 410 cfs with a peak outflow of 183 cfs and a size of 12 ac-ft. These calculations were done assuming the land use for the area would be mixed use commercial. Per the proposed Master Plan, this area is all Residential with 2-3.5 DU/AC; this coupled with the adjusted time of concentrations has significantly reduced the flows at this point. CCES has calculated the peak 100-year flows to be only 127cfs. Per the Final Drainage Report for Deer Creek at Northgate Filing No. 1, a 48" RCP storm sewer stub was provided at the end construction line of Ridgeline Drive. This system was anticipated to receive 185cfs per the DBPS and the FDR for Deer Creek. Due to the fact that only 127cfs is anticipated at this location, the 48" RCP will be adequate to convey all of the developed flows without detention. These flows were calculated using the SCS method. It is possible that when a final drainage report utilizing the rational method is prepared for the area in question, a small detention facility may be required to limit the flows to the allowable 185cfs. Upon final design of the single family residential subdivisions planned for this area, consideration will have to be taken in order to assess the need for detention at this 48" RCP system.

MAINTENANCE

The proposed regional detention facilities and channels are to be public facilities with maintenance of the surface by Flying Horse. This includes the natural channels that are to be routed through the proposed Golf Course and Conference Center as water features. It is proposed that all other facilities be public with maintenance performed the City of Colorado Springs.

POWERS BOULEVARD

As part of the proposed Master Plan, the future extension of Powers Blvd. is planned to bisect the Flying Horse property. As stated earlier, Powers Blvd. is going to be used as a major basin divider for the Monument Branch Drainage Basin, and the Black Squirrel Creek Drainage Basin. As Powers Blvd. crosses the various branches in the Monument Branch Drainage Basin, box culverts will be required in order to

pass the flows within these branches. Overall 2 crossings will require box culverts to be designed with the Powers Blvd alignment. Each of these crossing locations is adjacent to a detention facility outfall. Crossing #1 is located south of Detention Facility #1 and Crossing #2 is located southwest of Detention Facility #2. These culverts will need to be sized to pass the full 100-year developed flows per the City/County Drainage Criteria Manual, in the event that the detention facilities fail and large amounts of developed flows need to pass under Powers Blvd. These culverts are recommended per the DBPS for the Monument Branch Drainage Basin. As for the Black Squirrel Creek Drainage Basin, a much larger bridge crossing will have to be designed in order to convey the flows with in the Black Squirrel Creek. Per the DBPS a bridge crossing is required at this location with recommended conditions of 10-year flows of 1387cfs and 100 year flows of 3,577cfs. The current drainage map in this report now reflects the proposed drainage patterns associated with the Powers Boulevard corridor as well as identify assumed outfall point to downstream facilities. CDOT is currently reviewing our vertical profile of Powers Boulevard. Additional drainage analysis in the future will be required to further detail this corridor.

HYDROLOGIC CALCULATIONS

Hydrologic calculations were performed using the City of Colorado Springs/El Paso County Drainage Criteria Manual, as revised in November 1991 and October 1994. The Soil Conservation Service method utilizing Pond Pak version 8.0 was used to estimate peak storm water runoff and hydrograph generation anticipated from design storms with 5-year and 100-year recurrence interval. Rainfall data was obtained from standard isopluvial maps for this area from the City of Colorado Springs/El Paso County Drainage Criteria Manual, NOAA Atlas II, volume III. A 24-hour SCS Type II distribution was used per criteria with a 100-year precipitation of 4.40 inches and a 5-year precipitation of 2.7 inches. The historic discharge requirements of the Air Force Academy will be adhered to in accordance with their 2, 5, 10, 50 and 100 year historic release criteria.

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FLOODPLAIN STATEMENT

A portion of this site is located within a floodplain as determined by the Flood Insurance Rate Maps (F.I.R.M.) Map Number 08041C 0295F and effective date, March 17, 1997 (See Appendix). The affected area is located within the main channel of the Black Squirrel Creek.

DRAINAGE AND BRIDGE FEES

Monument Branch Drainage Basin

Per the approved DBPS for the Monument Branch Drainage Basin, only major systems include in the DBPS are reimbursable thru the drainage basin funds, not the initial systems. The year 2003 drainage and bridge fees are as follows:

Drainage Fees:

$5,645/acre x 1040.97 acres	$5,876,275.65

Pond Fees:

Land

$464/acre x 1040.97 acres	$ 483,010.08
TOTAL	**$6,359,285.73**

Middle Tributary Drainage Basin

Per the approved DBPS for the Middle Tributary Drainage Basin, only major systems included in the DBPS are reimbursable thru the drainage basin funds, not the initial systems. The year 2003 drainage and bridge fees are as follows:

Drainage Fees:

$4,178/acre x 121.85 acres	$ 509,089.30

Pond Fees:

Land

$587/acre x 121.85 acres	$ 71,525.95
TOTAL	**$ 580,615.25**

Black Squirrel Creek Drainage Basin

Per the approved DBPS, all major and initial public drainage systems are reimbursable through the drainage basin funds and are to be publicly owned and maintained if located in a drainage easement or road right-of-way. The year 2003 drainage and bridge fees are as follows:

Drainage Fees:	
$8,380/acre x 326.63 acres	$ 2,737,159.40
Bridge Fees:	
$957/acre x 326.63 acres	$ 312,585.91
Pond Fees:	
Land	
$412/acre x 326.63 acres	$ 134,571.56
TOTAL	**$ 3,184,316.87**

Misc. Elkhorn Drainage Basin (Non Fee Basin)

75.80 acres included in the Non Fee Basin.

Fees are due prior to plat recordation. Prior to issuance of building permits a plat will need to be submitted and appropriate drainage facility and erosion control assurances will need to be posted.

CCES proposes that the Monument Branch Drainage Basin become a closed basin. This proposal is due to the fact that the upper portion of this basin is controlled by Classic Homes, and the required detention facilities will detain and release flows based on the criteria set forth by the Air Force Academy and release only historic 2, 5, 10, 50 and 100 year historic flows into Monument Creek. If acceptable the DBPS will be modified to reflect the closed basin designation.

CONSTRUCTION COST OPINION

Quantities and costs were evaluated for the major systems that will be required for the development of the proposed Master Plan for the Flying Horse property. These

improvements include the replacement of existing inadequately sized culverts, storm sewers, lined channels, box culverts and regional detention facilities. These costs and quantities are conceptual.

Monument Branch Drainage Basin

ITEM	DESCRIPTION	QUANTITY	UNIT COST	COST
1.	18" RCP Storm Pipe	450 LF	$32/LF	$ 14,400.00
2.	24" RCP Storm Pipe	1,400 LF	$35/LF	$ 49,000.00
3.	30" RCP Storm Pipe	5,335 LF	$38/LF	$ 202,730.00
4.	36" RCP Storm Pipe	3,150LF	$46/LF	$ 144,900.00
5.	42" RCP Storm Pipe	2,490 LF	$55/LF	$ 136,950.00
6.	48" RCP Storm Pipe	5,830 LF	$60/LF	$ 349,800.00
7.	54" RCP Storm Pipe	2,700 LF	$65/LF	$ 175,500.00
8.	60" RCP Storm Pipe	900 LF	$80/LF	$ 72,000.00
9.	66" RCP Storm Pipe	2,440 LF	$95/LF	$ 231,800.00
10.	72" RCP Storm Pipe	2,000 LF	$150/LF	$ 300,000.00
11.	78" RCP Storm Pipe	2,200 LF	$200/LF	$ 440,000.00
12.	84" RCP Storm Pipe	3,000 LF	$225/LF	$ 675,000.00
13.	90" RCP Storm Pipe	1,650 LF	$300/LF	$ 495,000.00
14.	Detention Facility # 1	43 AC-FT	$15,000	$ 795,000.00
15.	Detention Facility # 2	16 AC-FT	$20,000	$ 320,000.00
16.	Detention Facility # 3	16 AC-FT	$20,000	$ 320,000.00
17.	Box Culvert #1 (10X10)	800 LF	$300	$ 240,000.00
18.	Box Culvert #2(10X10)	800 LF	$300	$ 240,000.00
SUB-TOTAL				**$5,052,080.00**
15% ENGINEERING & CONTINGENCIES				**$ 757,812.00**
TOTAL				**$5,809,892.00**

Middle Tributary Drainage Basin

ITEM	DESCRIPTION	QUANTITY	UNIT COST	COST
1.	18" RCP Storm Pipe	300 LF	$32/LF	$ 9,600.00
2.	30" RCP Storm Pipe	1,050 LF	$38/LF	$ 39,900.00
3.	42" RCP Storm Pipe	600 LF	$55/LF	$ 33,000.00
SUB-TOTAL				**$ 82,500.00**
15% ENGINEERING & CONTINGENCIES				**$ 12,375.00**
TOTAL				**$ 94,875.00**

Black Squirrel Creek Drainage Basin

ITEM	DESCRIPTION	QUANTITY	UNIT COST	COST
1.	18" RCP Storm Pipe	500 LF	$32/LF	$ 16,000.00
2.	30" RCP Storm Pipe	1,700 LF	$38/LF	$ 64,600.00
3.	36" RCP Storm Pipe	1,100 LF	$46/LF	$ 50,600.00
4.	42" RCP Storm Pipe	500 LF	$55/LF	$ 27,500.00
5.	48" RCP Storm Pipe	450 LF	$60/LF	$ 27,000.00
6.	54" RCP Storm Pipe	1,700 LF	$65/LF	$ 110,500.00
7.	Detention Facility # 4	5 AC-FT	$25,000	$ 125,000.00
SUB-TOTAL				**$ 421,200.00**
15% ENGINEERING & CONTINGENCIES				**$ 63,180.00**
TOTAL				**$ 484,380.00**

Classic Consulting Engineers & Surveyors cannot and does not guarantee that the construction cost will not vary from these opinions of probable construction costs. These opinions represent our best judgment as design professionals familiar with the construction industry and this development in particular

SUMMARY

Developed flows are to be routed to the various proposed detention facilities that are required to detain the 2, 5, 10, 50, and 100 year storms and release only the historic flows into the various drainage basins per the Air Force Academy criteria. Flows for the land uses were calculated using the SCS method and are conceptual only. Upon development of the individual Master Plan components, a Preliminary/Final Drainage Report will be required utilizing the Rational Method per the City/County Drainage Criteria Manual. Impact on Jurisdictional waters and the Preble's Meadow Jumping Mouse will be minimized with the development of the proposed Master Plan. Existing DBPS's will be required to be updated to comply with the systems proposed in this report.

PREPARED BY:

Classic Consulting, Engineers & Surveyors, LLC

David L. Gibson, EI
Design Engineer

Kyle R. Campbell P.E.
Division Manager

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REFERENCES

1. City of Colorado Springs/County of El Paso Drainage Criteria Manual dated October 1991.

2. "Black Squirrel Creek Drainage Basin Planning Study (Revision)" URS Corporation dated November 1988.

3. "Middle Tributary Drainage Basin Planning Study" URS Corporation, dated August 1987.

4. "Monument Branch Drainage Basin Planning Study" URS Corporation, dated August 1987.

5. "Master Development Drainage Plan Update Fairlane Technological Park" Kiowa Engineering Corporation dated November 2000.

6. "Master Development Drainage Plan for The Estates at Middle Creek" JR Engineering dated July 2000 rev. June 2001.

7. "Final Drainage Report for Deer Creek at Northgate Filing No. 1" Classic Consulting Engineers & Surveyors, dated February 2001.

8. "Northgate Master Development Drainage Plan (Black Squirrel Creek and Miscellaneous Basins" URS Corporation dated August 1989.

9. "Northgate Master Development Drainage Plan (Monument Branch & Middle Tributary Basins)" URS Corporation dated December 1987.

10. "Final Drainage Report for Serenity Park" JR Engineering, dated February 2000, Revised July 2000.

11. "Final Drainage Report for Trailridge at Northgate Filing No. 7" JR Engineering, dated September 1999.

12. "Master Development Drainage Plan for Black Squirrel Business Park" JR Engineering dated April 2001.

13. "Preliminary/Final Drainage Report for Mcleod USA Main Switch Facility Colorado Springs" JR Engineering dated December 1998.

14. "Preliminary/Final Drainage Report for Bella Springs Filing No. 1" JR Engineering dated July 2000.

15. "Preliminary and Final Drainage Report for Northgate Subdivision Filing #2" URS Greiner, Inc. dated June 1997.

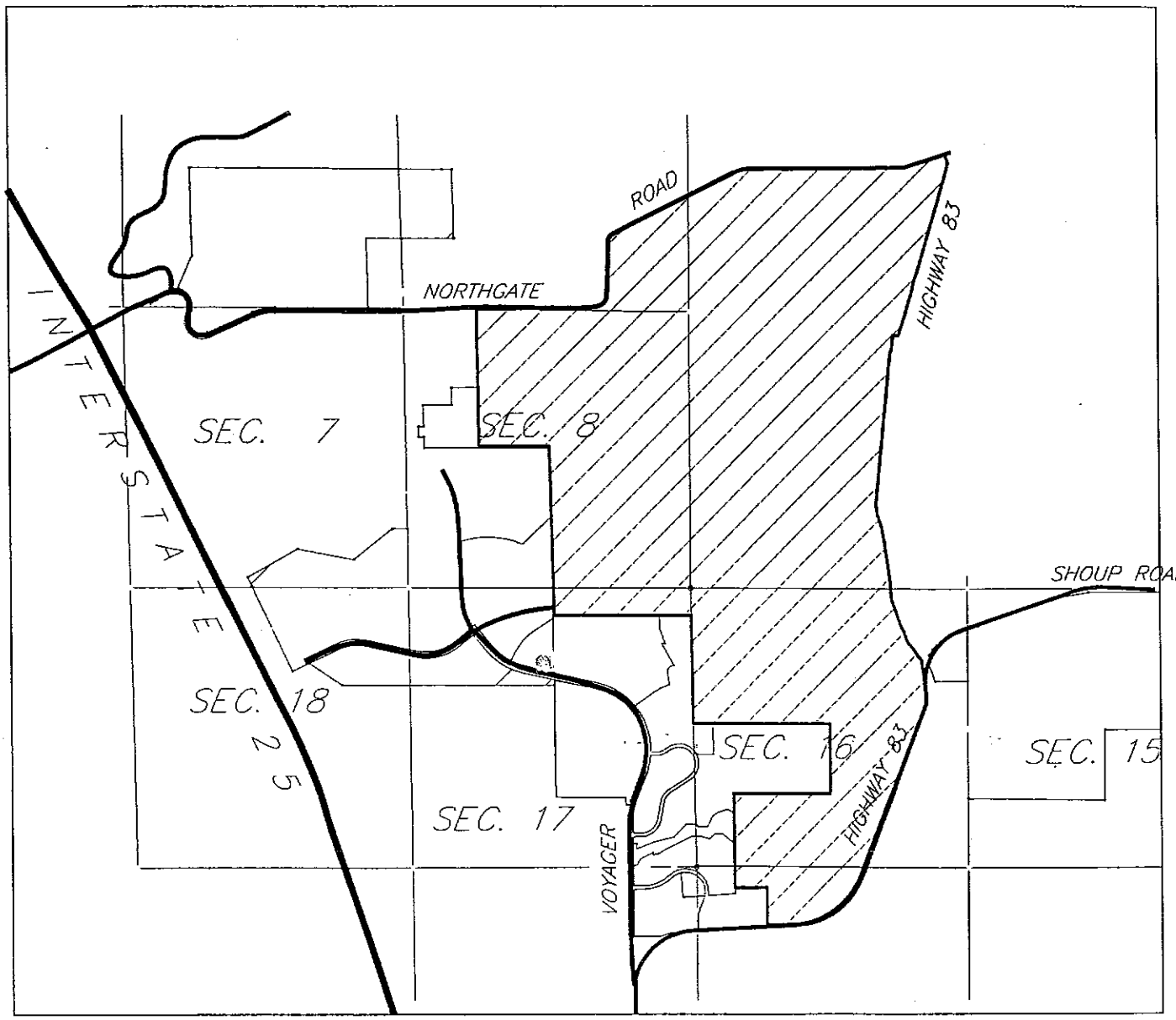
16. "Northgate Filing No. 3 Addendum and Ramtron Filing No. 1 Preliminary and Final Drainage Report, URS Consultants Inc. dated July 1989, revised August 1989.

17. "Liberty Heights, Filing No. 1 Preliminary/Final Drainage Report and Erosion Control Plan" JR Engineering LTD. Dated October 1989.

18. "Northgate Phase I Final Drainage Report" URS Corporation dated June 1987.

APPENDIX

VICINITY MAP



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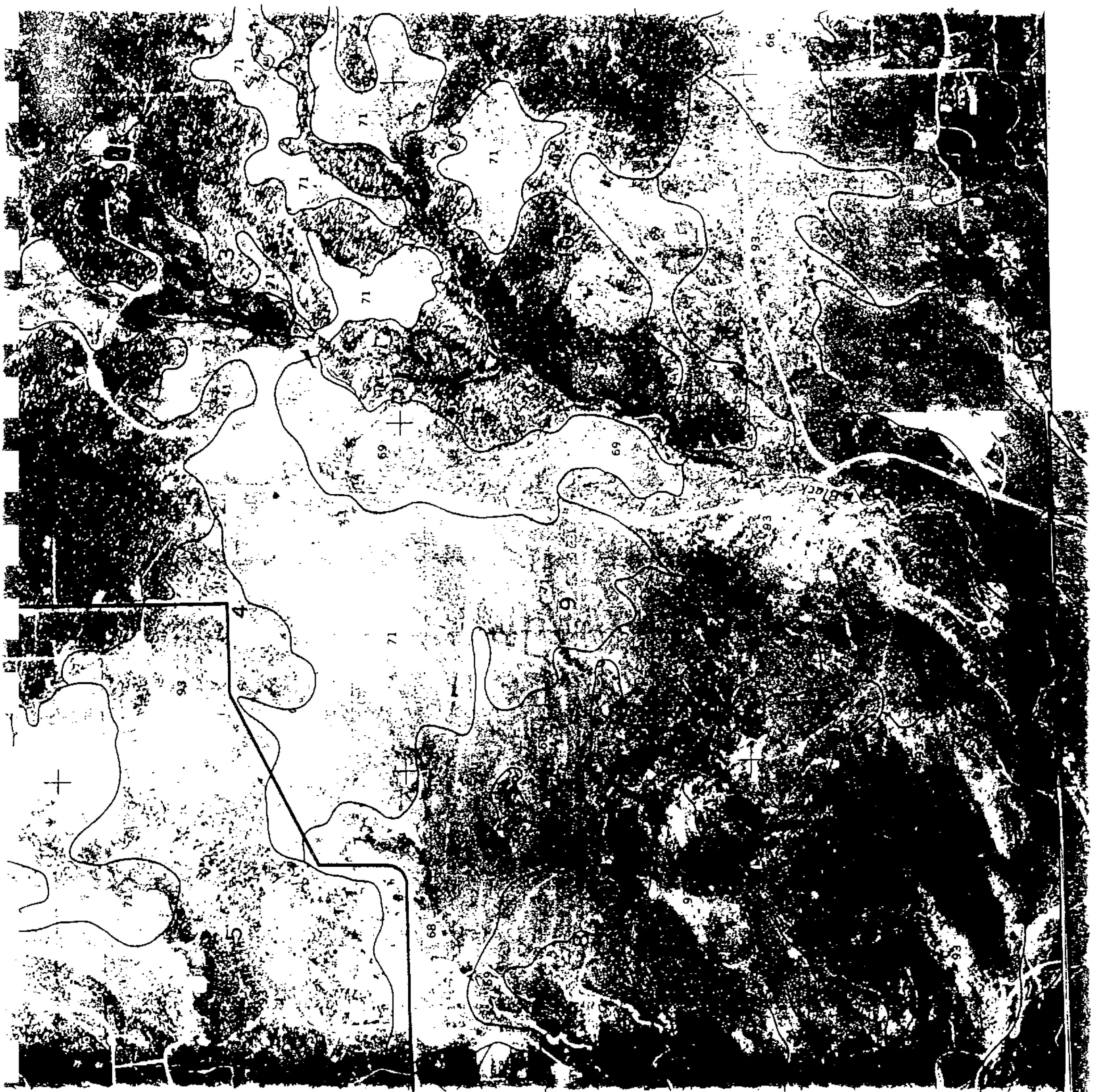
SOILS MAP (S.C.S SURVEY)



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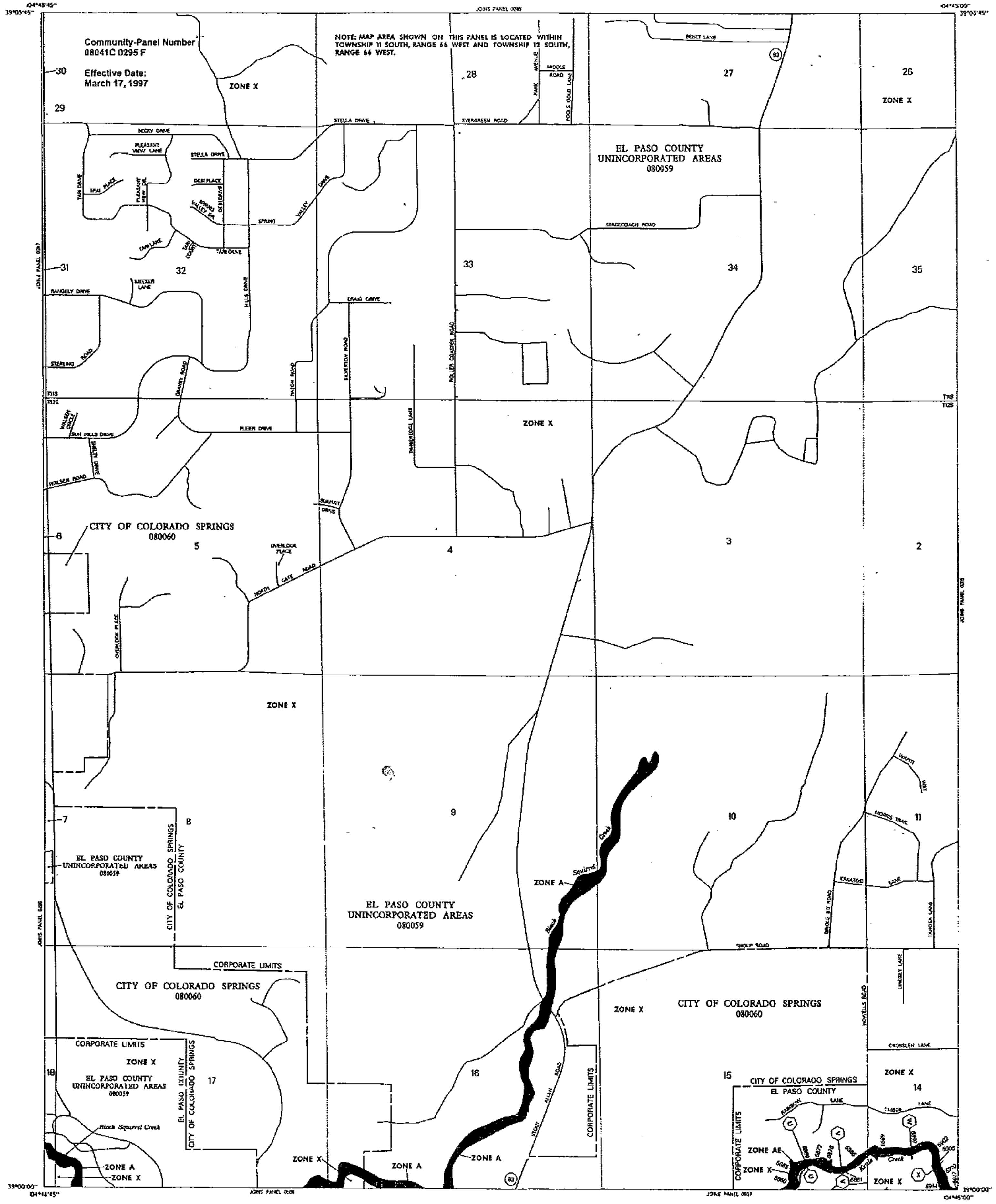
F.E.M.A. MAP


Community-Panel Number
08041C 0295 F
Effective Date:
March 17, 1997
NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 11 SOUTH, RANGE 66 WEST AND TOWNSHIP 12 SOUTH, RANGE 66 WEST.
ZONE X
EL PASO COUNTY
UNINCORPORATED AREAS
080059
CITY OF COLORADO SPRINGS
080060
STELLA DRIVE
EVERGREEN ROAD
BECKY DRIVE
STAGECOACH ROAD
CRAIG DRIVE
ROLLER COASTER ROAD
SILVERTON ROAD
RATON ROAD
GRANBY ROAD
RANGELY DRIVE
STERLING ROAD
FIEBER DRIVE
WALSEN ROAD
SUN HILLS DRIVE
HILLS DRIVE
NORTH GATE ROAD
OVERLOOK PLACE
SHOUP ROAD
KAKATOSI LANE
MORGS TRAIL
HOWELLS ROAD
CROSSLEN LANE
TIMBER LANE
CORPORATE LIMITS
ZONE A
ZONE AE
Black Squirrel Creek
JOINS PANEL 0295
JOINS PANEL 0506
JOINS PANEL 0507
39°03'45"
39°00'00"
104°48'45"
104°45'00"
T11S
T12S
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WETLANDS EXHIBIT

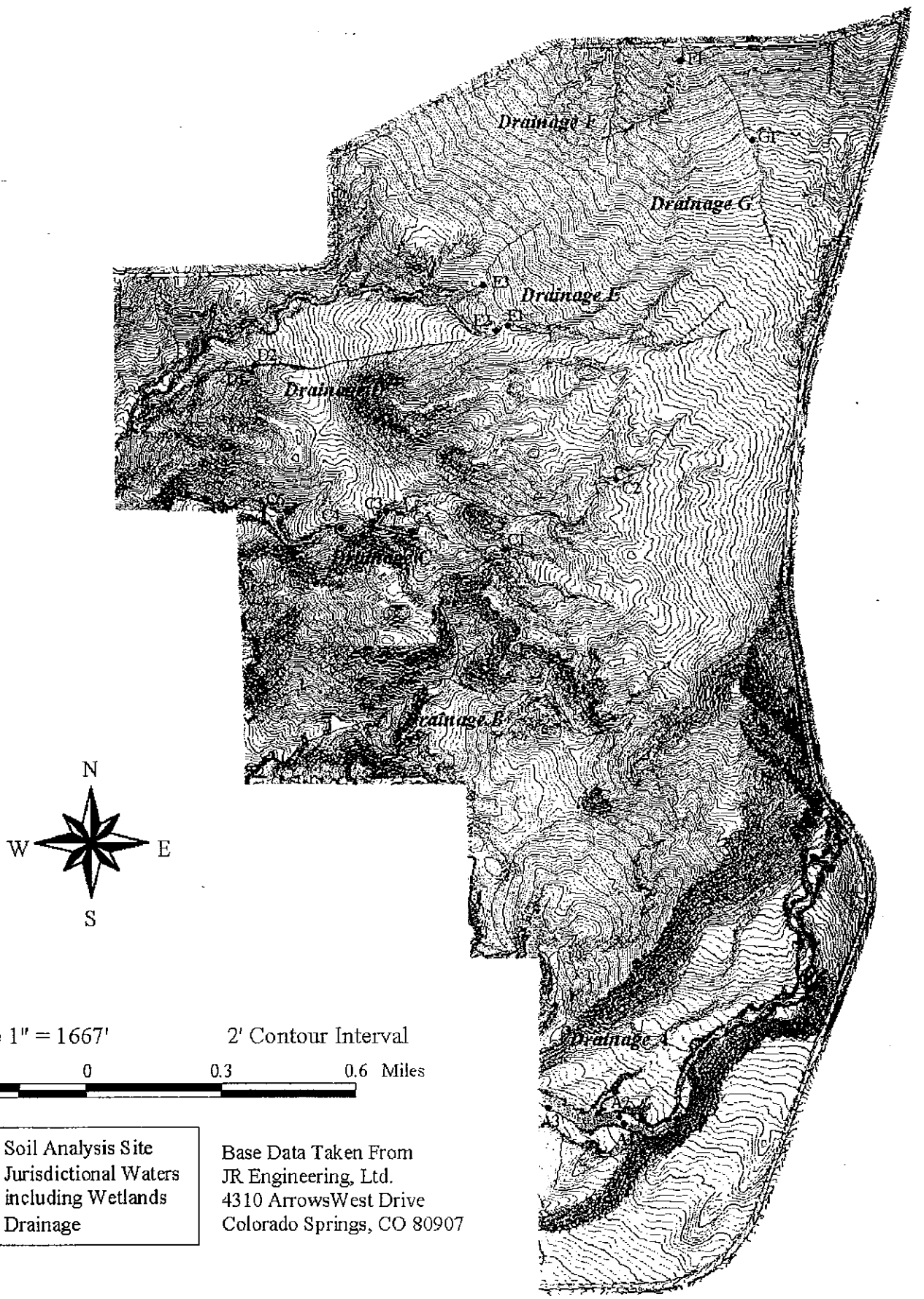

Figure 2. Jurisdictional Waters including Wetlands on the Blake Property, El Paso County, Colorado

Created July 24, revised September 27, 2000 by SWCA, Inc. Environmental Consultants, 8461 Turnpike Dr. Suite 100, Westminster, CO 80031

Path I:\3702-7116 blake prop\blake.apr

HYDRAULIC CALCULATIONS

JOB NAME: *FLYING HORSE*
JOB NUMBER: *9200.00*
DATE: *08/20/02*
CALCULATED BY: *DLG*

MASTER DEVELOPMENT DRAINAGE PLAN (SUMMARY)

EXISTING	TOTAL AREA (AC)	CN	LAND USE PER MASTER PLAN	Tc (MIN)	FLOW RATES Q (5) cfs	FLOW RATES Q (100) cfs
EX-1	126.00	61.00	EXISTING BASIN	32.00	13	89
EX-2	68.00	61.00	EXISTING BASIN	32.00	7	48
EX-3	68.00	61.00	EXISTING BASIN	32.00	7	49
EX-4	166.00	61.00	EXISTING BASIN	32.00	17	117
EX-5	121.00	61.00	EXISTING BASIN	32.00	12	85
EX-6	63.00	61.00	EXISTING BASIN	32.00	6	44
EX-7	26.00	61.00	EXISTING BASIN	32.00	3	18
EX-8	76.00	61.00	EXISTING BASIN	32.00	8	53
EX-9	60.00	61.00	EXISTING BASIN	32.00	6	42
EX-10	100.00	61.00	EXISTING BASIN	32.00	10	70
EX-11	151.00	61.00	EXISTING BASIN	32.00	15	106
EX-12	116.00	61.00	EXISTING BASIN	32.00	37	136
EX-13	115.00	61.00	EXISTING BASIN	32.00	12	80
EX-14	209.00	61.00	EXISTING BASIN	32.00	21	146
EX-15	73.00	61.00	EXISTING BASIN	32.00	7	47
OS-1	68.00	68.00	OFFSITE BASIN	25.00	23	89
OS-2	138.00	68.00	OFFSITE BASIN	25.00	47	181
OS-3	95.00	68.00	OFFSITE BASIN	25.00	33	125
NORTH MONUMENT BRANCH						
PARCEL-7	71.00	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	34	117
PARCEL-9	82.00	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	40	136
PARCEL-27	80.00	88.00	SCHOOL SITE	0.25	150	293
PARCEL-34	5.00	61.00	NEIGHBORHOOD PARK	0.50	1	4
PARCEL-21	16.00	92.00	COMMUNITY COMMERCIAL	0.25	36	64
PARCEL-20	11.00	92.00	COMMUNITY COMMERCIAL	0.20	26	48
PARCEL-32	76.00	92.00	VILLAGE 10 DU/AC	0.25	169	305
PARCEL-35	3.00	61.00	VILLAGE PARK	0.45	1	2
PARCEL-6	33.00	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	16	55
PORTION PARCEL-2	14.50	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	7	24
PORTION PARCEL-30-NORTH	30.00	61.00	GOLF COURSE	0.50	3	22

JOB NAME:	*FLYING HORSE*
JOB NUMBER:	*9200.00*
DATE:	*08/20/02*
CALCULATED BY:	*DLG*

MASTER DEVELOPMENT DRAINAGE PLAN (SUMMARY)

EXISTING	TOTAL AREA (AC)	CN	LAND USE PER MASTER PLAN	Tc (MIN)	FLOW RATES Q (5) cfs	FLOW RATES Q (100) cfs
PORTION PARCEL-22	27.50	92.00	OFFICE	0.20	66	120
PARCEL-19	8.00	92.00	REGIONAL COMMERCIAL	0.20	19	35
PARCEL-26	82.00	88.00	OFFICE / INDUSTRIAL	0.25	154	301
PWRS-1	9.50	98.00	POWERS BLVD	0.17	28	46
SOUTH MONUMENT BRANCH						
PARCEL-11	16.00	75.00	RESIDENTIAL 3.5-8 DU/AC	0.33	13	35
PORTION PARCEL-2	20.50	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	10	34
PORTION PARCEL-30-NORTH	54.00	61.00	GOLF COURSE	0.50	6	42
PORTION PARCEL-22	6.50	92.00	OFFICE	15.00	14	26
PARCEL-12	12.00	75.00	RESIDENTIAL 3.5-8 DU/AC	0.30	10	26
PARCEL 24	30.00	88.00	OFFICE / INDUSTRIAL	0.25	56	110
PARCEL-25	67.00	86.00	OFFICE / INDUSTRIAL	0.25	114	233
PARCEL 15	3.00	88.00	OFFICE / INDUSTRIAL	15.00	4	8
PARCEL-18	15.00	75.00	REGIONAL COMMERCIAL	0.20	14	38
PARCEL 31	20.00	88.00	CONFERENCE CENTER	0.25	38	73
PARCEL-30-SOUTH	113.00	61.00	GOLF COURSE	0.50	6	42
PARCEL-16	9.00	85.00	RES. MULTI FAM. 12-20 DU/AC	0.33	13	27
PARCEL-8	54.00	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	26	89
PORTION PARCEL-1	53.00	70.00	RESIDENTIAL 2 DU/AC	0.33	26	88
PWRS-2	15.00	98.00	POWERS BLVD	0.17	44	73
PWRS-3	11.00	98.00	POWERS BLVD	0.17	33	54
MIDDLE TRIBUTARY BRANCH						
PORTION PARCEL-1	29.00	70.00	RESIDENTIAL 2 DU/AC	20.00	14	49
PORTION PARCEL-5	40.00	70.00	RESIDENTIAL 2-3.5 DU/AC	20.00	19	66
PORTION PARCEL-33	4.00	61.00	NEIGHBORHOOD PARK	30.00	1	3
PORTION PARCEL-4	42.50	70.00	RESIDENTIAL 2-3.5 DU/AC	20.00	21	70
BLACK SQUIRREL CREEK						
PORTION PARCEL-5	33.00	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	16	54
PORTION PARCEL-33	6.00	61.00	NEIGHBORHOOD PARK	0.50	1	5

JOB NAME:	*FLYING HORSE*
JOB NUMBER:	*9200.00*
DATE:	*08/20/02*
CALCULATED BY:	*DLG*

MASTER DEVELOPMENT DRAINAGE PLAN (SUMMARY)

EXISTING	TOTAL AREA (AC)	CN	LAND USE PER MASTER PLAN	Tc (MIN)	FLOW RATES	
					Q (5) cfs	Q (100) cfs
PORTION PARCEL-4	27.50	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	13	46
PORTION PARCEL-3-NORTH	31.00	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	15	51
PORTION PARCEL-3-SOUTH	19.00	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	9	31
PARCEL-29 NORTH	34.00	61.00	OPEN SPACE	32.00	3	24
PARCEL -29 SOUTH	43.00	61.00	OPEN SPACE	32.00	4	30
PARCEL 10	19.00	75.00	RESIDENTIAL 3.5-8 DU/AC	18.00	15	41
PORTION PARCEL-28	18.00	61.00	COMMUNITY PARK	30.00	2	13
PARCEL-14	7.00	85.00	RES. MULTI FAM. 12-20 DU/AC	15.00	9	35
PWRS-4	15.00	98.00	POWERS BLVD	0.17	44	73
PARCEL 23	62.00	70.00	RESIDENTIAL 2-3.5 DU/AC	0.33	103	202
ELKHORN						
PORTION PARCEL 28	7.00	61.00	COMMUNITY PARK	30.00	1	5
PARCEL-13	14.00	85.00	RES. MULTI FAM. 12-20 DU/AC	15.00	23	47
PARCEL-17	46.00	92.00	REGIONAL COMMERCIAL	12.00	111	200

HYDROLOGIC CALCULATIONS

JOB NAME: *FLYING HORSE*
JOB NUMBER: *3/9/1925*
DATE: *08/20/02*
CALCULATED BY: *DLG*

* PIPES ARE LISTED AT MAXIMUM SIZE REQUIRED TO ACCOMMODATE Q100 FLOWS AT MINIMUM GRADE. REFER TO INDIVIDUAL PIPE SHEETS FOR HYDRAULIC INFORMATION.

PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins	Flow		Pipe Size*	APPROX. LENGTH (LF)
		Q(5) cfs	Q(100) cfs		
1	PARCEL 21	36	63	36" RCP @ 1.00%	435
2	PARCEL 20	26	48	36" RCP @ 1.00%	250
3	PIPE 1 & 2	61	112	48" RCP @ 1.00%	350
4	DBPS BASIN A	23	89	42" RCP @ 1.00%	1690
5	PARCEL 7	34	118	48" RCP @ 1.00%	500
6	PIPE 4 & 5	57	203	60" RCP @ 1.00%	590
7	PIPE 6 & 3	107	297	66" RCP @ 1.00%	250
8	PARCEL 34	1	4	18" RCP @ 1.00%	1350
9	PIPE 7 & 8	108	300	66" RCP @ 1.00%	1350
10	1/2 DBPS BASIN E	23	178	54" RCP @ 1.00%	300
11	PARCEL 9	40	136	48" RCP @ 1.00%	2500
12	PIPE 10 & 11	85	307	66" RCP @ 1.00%	880
13	PIPE 9 & 12	188	607	84" RCP @ 1.00%	400
14	1/2 DBPS BASIN E	32	124	48" RCP @ 1.00%	500

JOB NAME:	*FLYING HORSE*
JOB NUMBER:	*3/9/1925*
DATE:	*08/20/02*
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PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins	Flow		Pipe Size*	APPROX. LENGTH (LF)
		Q(5) cfs	Q(100) cfs		
15	PARCEL 27	150	293	66" RCP @ 1.00%	350
16	SCHOOL OUT	47	159	54" RCP @ 1.00%	150
17	PARCEL 6	16	55	36" RCP @ 1.00%	200
18	PIPE 13 & 17	204	661	90" RCP @ 1.50%	500
19	PIPE 16 & 18	232	792	90" RCP @ 1.50%	700
20	PARCEL 19	19	35	30" RCP @ 1.00%	200
21	PIPE 19 & 20	246	818	90" RCP @ 1.50%	200
22	PARCEL 35	1	2	18" RCP @ 1.00%	2000
23	PARCEL 32	169	306	66" RCP @ 1.00%	200
24	PIPE 22 & 23	169	307	66" RCP @ 1.00%	2200
25	1/2 PARCEL 2	7	24	30" RCP @ 1.00%	100
26	PIPE 24 & 25	176	330	66" RCP @ 1.00%	600
27	PARCEL 22	66	120	48" RCP @ 1.00%	200

JOB NAME:	*FLYING HORSE*
JOB NUMBER:	*3/9/1925*
DATE:	*08/20/02*
CALCULATED BY:	*DLG*

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PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins	Flow		Pipe Size*	APPROX. LENGTH (LF)
		Q(5) cfs	Q(100) cfs		
28	PIPE 26 & 27	238	443	78" RCP @ 1.00%	1300
29	POND 1 OUT	529	1257		200
30	PARCEL 11	13	35	30" RCP @ 1.00%	500
31	1/2 PARCEL 2	10	34	30" RCP @ 1.00%	200
32	PIPE 30 & 31	23	69	42" RCP @ 1.00%	800
33	1/2 PARCEL 30	5	34	30" RCP @ 1.00%	400
34	PIPE 32 & 33	25	96	42" RCP @ 1.00%	200
35	PARCEL 12	10	26	30" RCP @ 1.00%	2000
36	PARCEL 24	56	110	48" RCP @ 1.00%	800
37	PARCEL 25 & 15	118	239	60" RCP @ 1.00%	1300
38	POND 2 OUT	31	107	48" RCP @ 1.00%	200
39	PARCEL 18	14	38	30" RCP @ 1.00%	2700
40	PARCEL 31	38	73	42" RCP @ 1.00%	200

JOB NAME: *FLYING HORSE*
JOB NUMBER: *3/9/1925*
DATE: *08/20/02*
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* PIPES ARE LISTED AT MAXIMUM SIZE REQUIRED TO ACCOMMODATE Q100 FLOWS AT MINIMUM GRADE. REFER TO INDIVIDUAL PIPE SHEETS FOR HYDRAULIC INFORMATION.

PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins	Flow		Pipe Size*	APPROX. LENGTH (LF)
		Q(5) cfs	Q(100) cfs		
41	PIPE 39 & 38	52	111	48" RCP @ 1.00%	200
42	1/2 PARCEL 1	26	88	42" RCP @ 1.00%	400
43	PIPE 41 & 42	75	194	54" RCP @ 1.00%	1200
44	PARCEL 16	13	27	30" RCP @ 1.00%	600
45	PARCEL 8	26	89	42" RCP @ 1.00%	500
46	POND 3 OUT	63	268	66" RCP @ 1.00%	500
47	PARCEL 33	1	3	18" RCP @ 1.00%	250
48	PARCEL 5	19	66	36" RCP @ 1.00%	300
49	PIPE 47 & 48	20	68	42" RCP @ 1.00%	800
50	PARCEL 4	21	70	36" RCP @ 1.00%	200
51	PARCLE 1	14	48	42" RCP @ 1.00%	400
52	PIPE 49, 50, 51	54	187	54" RCP @ 1.00%	500
53	PARCEL 33	1	5	18" RCP @ 1.00%	200

JOB NAME:	*FLYING HORSE*
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DATE:	*08/20/02*
CALCULATED BY:	*DLG*

* PIPES ARE LISTED AT MAXIMUM SIZE REQUIRED TO ACCOMMODATE Q100 FLOWS AT MINIMUM GRADE. REFER TO INDIVIDUAL PIPE SHEETS FOR HYDRAULIC INFORMATION.

PIPE ROUTING SUMMARY

Pipe Run	Contributing Basins	Flow		Pipe Size*	APPROX. LENGTH (LF)
		Q(5) cfs	Q(100) cfs		
54	PARCEL 5	11	54	36" RCP @ 1.00%	900
55	PIPE 53 & 54	16	58	36" RCP @ 1.00%	200
56	PARCEL 4	13	46	36" RCP @ 1.00%	200
57	PIPE 55 & 56	30	103	48" RCP @ 1.00%	100
58	PARCEL 3	15	51	36" RCP @ 1.00%	900
59	PIPE 57 & 58	44	154	54" RCP @ 1.00%	200
60	PARCEL 23	103	202	54" RCP @ 1.00%	450
61	PARCEL 3	9	31	30" RCP @ 1.00%	200
62	PIPE 60 & 61	112	234	60" RCP @ 1.00%	1200
63	POND 4 OUT	27	83	42" RCP @ 1.00%	200

PIPE RUN 1
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 2
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 3
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 4
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 5
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 6
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	60	in

Results		
Depth	5.00	ft
Discharge	260.43	cfs
Flow Area	19.6	ft²
Wetted Perime	15.71	ft
Top Width	0.00	ft
Critical Depth	4.49	ft
Percent Full	100.0	%
Critical Slope	008827	ft/ft
Velocity	13.26	ft/s
Velocity Head	2.73	ft
Specific Energ	7.73	ft
Froude Numbe	0.00	
Maximum Disc	280.14	cfs
Discharge Full	260.43	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 7
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	66	in

Results		
Depth	5.50	ft
Discharge	335.79	cfs
Flow Area	23.8	ft²
Wetted Perime	17.28	ft
Top Width	0.00	ft
Critical Depth	4.96	ft
Percent Full	100.0	%
Critical Slope	008789	ft/ft
Velocity	14.13	ft/s
Velocity Head	3.10	ft
Specific Energ	8.60	ft
Froude Numbe	0.00	
Maximum Disc	361.21	cfs
Discharge Full	335.79	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 8
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	18	in

Results		
Depth	1.50	ft
Discharge	10.50	cfs
Flow Area	1.8	ft²
Wetted Perime	4.71	ft
Top Width	0.00	ft
Critical Depth	1.25	ft
Percent Full	100.0	%
Critical Slope	009774	ft/ft
Velocity	5.94	ft/s
Velocity Head	0.55	ft
Specific Energ	2.05	ft
Froude Numbe	0.00	
Maximum Disc	11.30	cfs
Discharge Full	10.50	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 9
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	66	in

Results		
Depth	5.50	ft
Discharge	335.79	cfs
Flow Area	23.8	ft²
Wetted Perime	17.28	ft
Top Width	0.00	ft
Critical Depth	4.96	ft
Percent Full	100.0	%
Critical Slope	008789	ft/ft
Velocity	14.13	ft/s
Velocity Head	3.10	ft
Specific Energ	8.60	ft
Froude Numbe	0.00	
Maximum Disc	361.21	cfs
Discharge Full	335.79	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 10
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	54	in

Results		
Depth	4.50	ft
Discharge	196.64	cfs
Flow Area	15.9	ft²
Wetted Perime	14.14	ft
Top Width	0.00	ft
Critical Depth	4.01	ft
Percent Full	100.0	%
Critical Slope	008874	ft/ft
Velocity	12.36	ft/s
Velocity Head	2.38	ft
Specific Energ	6.88	ft
Froude Numbe	0.00	
Maximum Disc	211.53	cfs
Discharge Full	196.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 11
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 12
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	66	in

Results		
Depth	5.50	ft
Discharge	335.79	cfs
Flow Area	23.8	ft²
Wetted Perime	17.28	ft
Top Width	0.00	ft
Critical Depth	4.96	ft
Percent Full	100.0	%
Critical Slope	008789	ft/ft
Velocity	14.13	ft/s
Velocity Head	3.10	ft
Specific Energ	8.60	ft
Froude Numbe	0.00	
Maximum Disc	361.21	cfs
Discharge Full	335.79	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 13
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	84	in

Results		
Depth	7.00	ft
Discharge	638.80	cfs
Flow Area	38.5	ft²
Wetted Perime	21.99	ft
Top Width	0.00	ft
Critical Depth	6.39	ft
Percent Full	100.0	%
Critical Slope	008715	ft/ft
Velocity	16.60	ft/s
Velocity Head	4.28	ft
Specific Energ	11.28	ft
Froude Numbe	0.00	
Maximum Disc	687.16	cfs
Discharge Full	638.80	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 14
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 15
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	66	in

Results		
Depth	5.50	ft
Discharge	335.79	cfs
Flow Area	23.8	ft²
Wetted Perime	17.28	ft
Top Width	0.00	ft
Critical Depth	4.96	ft
Percent Full	100.0	%
Critical Slope	008789	ft/ft
Velocity	14.13	ft/s
Velocity Head	3.10	ft
Specific Energ	8.60	ft
Froude Numbe	0.00	
Maximum Disc	361.21	cfs
Discharge Full	335.79	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 16
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	54	in

Results		
Depth	4.50	ft
Discharge	196.64	cfs
Flow Area	15.9	ft²
Wetted Perime	14.14	ft
Top Width	0.00	ft
Critical Depth	4.01	ft
Percent Full	100.0	%
Critical Slope	008874	ft/ft
Velocity	12.36	ft/s
Velocity Head	2.38	ft
Specific Energ	6.88	ft
Froude Numbe	0.00	
Maximum Disc	211.53	cfs
Discharge Full	196.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 17
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 18
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	90	in

Results		
Depth	7.50	ft
Discharge	767.83	cfs
Flow Area	44.2	ft²
Wetted Perime	23.56	ft
Top Width	0.00	ft
Critical Depth	6.87	ft
Percent Full	100.0	%
Critical Slope	008699	ft/ft
Velocity	17.38	ft/s
Velocity Head	4.69	ft
Specific Energ	12.19	ft
Froude Numbe	0.00	
Maximum Disc	825.96	cfs
Discharge Full	767.83	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 19
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	015000	ft/ft
Diameter	90	in

Results		
Depth	7.50	ft
Discharge	940.40	cfs
Flow Area	44.2	ft²
Wetted Perime	23.56	ft
Top Width	0.00	ft
Critical Depth	7.19	ft
Percent Full	100.0	%
Critical Slope	013050	ft/ft
Velocity	21.29	ft/s
Velocity Head	7.04	ft
Specific Energ	14.54	ft
Froude Numbe	0.00	
Maximum Disc	,011.59	cfs
Discharge Full	940.40	cfs
Slope Full	015000	ft/ft
Flow Type	N/A	

PIPE RUN 20
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 21
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	015000	ft/ft
Diameter	90	in

Results		
Depth	7.50	ft
Discharge	940.40	cfs
Flow Area	44.2	ft²
Wetted Perime	23.56	ft
Top Width	0.00	ft
Critical Depth	7.19	ft
Percent Full	100.0	%
Critical Slope	013050	ft/ft
Velocity	21.29	ft/s
Velocity Head	7.04	ft
Specific Energ	14.54	ft
Froude Numbe	0.00	
Maximum Disc	,011.59	cfs
Discharge Full	940.40	cfs
Slope Full	015000	ft/ft
Flow Type	N/A	

PIPE RUN 22
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	18	in

Results		
Depth	1.50	ft
Discharge	10.50	cfs
Flow Area	1.8	ft²
Wetted Perime	4.71	ft
Top Width	0.00	ft
Critical Depth	1.25	ft
Percent Full	100.0	%
Critical Slope	009774	ft/ft
Velocity	5.94	ft/s
Velocity Head	0.55	ft
Specific Energ	2.05	ft
Froude Numbe	0.00	
Maximum Disc	11.30	cfs
Discharge Full	10.50	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 23
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	66	in

Results		
Depth	5.50	ft
Discharge	335.79	cfs
Flow Area	23.8	ft²
Wetted Perime	17.28	ft
Top Width	0.00	ft
Critical Depth	4.96	ft
Percent Full	100.0	%
Critical Slope	008789	ft/ft
Velocity	14.13	ft/s
Velocity Head	3.10	ft
Specific Energ	8.60	ft
Froude Numbe	0.00	
Maximum Disc	361.21	cfs
Discharge Full	335.79	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 24
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	66	in

Results		
Depth	5.50	ft
Discharge	335.79	cfs
Flow Area	23.8	ft²
Wetted Perime	17.28	ft
Top Width	0.00	ft
Critical Depth	4.96	ft
Percent Full	100.0	%
Critical Slope	008789	ft/ft
Velocity	14.13	ft/s
Velocity Head	3.10	ft
Specific Energ	8.60	ft
Froude Numbe	0.00	
Maximum Disc	361.21	cfs
Discharge Full	335.79	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 25
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 26
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	66	in

Results		
Depth	5.50	ft
Discharge	335.79	cfs
Flow Area	23.8	ft²
Wetted Perime	17.28	ft
Top Width	0.00	ft
Critical Depth	4.96	ft
Percent Full	100.0	%
Critical Slope	008789	ft/ft
Velocity	14.13	ft/s
Velocity Head	3.10	ft
Specific Energ	8.60	ft
Froude Numbe	0.00	
Maximum Disc	361.21	cfs
Discharge Full	335.79	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 27
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 28
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	78	in

Results		
Depth	6.50	ft
Discharge	524.25	cfs
Flow Area	33.2	ft²
Wetted Perime	20.42	ft
Top Width	0.00	ft
Critical Depth	5.91	ft
Percent Full	100.0	%
Critical Slope	008735	ft/ft
Velocity	15.80	ft/s
Velocity Head	3.88	ft
Specific Energ	10.38	ft
Froude Numbe	0.00	
Maximum Disc	563.94	cfs
Discharge Full	524.25	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 30
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 31
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 32
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacil

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 33
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 34
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 35
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 36
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 37
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	60	in

Results		
Depth	5.00	ft
Discharge	260.43	cfs
Flow Area	19.6	ft²
Wetted Perime	15.71	ft
Top Width	0.00	ft
Critical Depth	4.49	ft
Percent Full	100.0	%
Critical Slope	008827	ft/ft
Velocity	13.26	ft/s
Velocity Head	2.73	ft
Specific Energ	7.73	ft
Froude Numbe	0.00	
Maximum Disc	280.14	cfs
Discharge Full	260.43	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 38
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 39
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 40
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 41
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 42
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 43
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	54	in

Results		
Depth	4.50	ft
Discharge	196.64	cfs
Flow Area	15.9	ft²
Wetted Perime	14.14	ft
Top Width	0.00	ft
Critical Depth	4.01	ft
Percent Full	100.0	%
Critical Slope	008874	ft/ft
Velocity	12.36	ft/s
Velocity Head	2.38	ft
Specific Energ	6.88	ft
Froude Numbe	0.00	
Maximum Disc	211.53	cfs
Discharge Full	196.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 44
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 45
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 46
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	66	in

Results		
Depth	5.50	ft
Discharge	335.79	cfs
Flow Area	23.8	ft²
Wetted Perime	17.28	ft
Top Width	0.00	ft
Critical Depth	4.96	ft
Percent Full	100.0	%
Critical Slope	008789	ft/ft
Velocity	14.13	ft/s
Velocity Head	3.10	ft
Specific Energ	8.60	ft
Froude Numbe	0.00	
Maximum Disc	361.21	cfs
Discharge Full	335.79	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 47
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	18	in

Results		
Depth	1.50	ft
Discharge	10.50	cfs
Flow Area	1.8	ft²
Wetted Perime	4.71	ft
Top Width	0.00	ft
Critical Depth	1.25	ft
Percent Full	100.0	%
Critical Slope	009774	ft/ft
Velocity	5.94	ft/s
Velocity Head	0.55	ft
Specific Energ	2.05	ft
Froude Numbe	0.00	
Maximum Disc	11.30	cfs
Discharge Full	10.50	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 48
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 49
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 50
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 51
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 52
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	54	in

Results		
Depth	4.50	ft
Discharge	196.64	cfs
Flow Area	15.9	ft²
Wetted Perime	14.14	ft
Top Width	0.00	ft
Critical Depth	4.01	ft
Percent Full	100.0	%
Critical Slope	008874	ft/ft
Velocity	12.36	ft/s
Velocity Head	2.38	ft
Specific Energ	6.88	ft
Froude Numbe	0.00	
Maximum Disc	211.53	cfs
Discharge Full	196.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 53
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	18	in

Results		
Depth	1.50	ft
Discharge	10.50	cfs
Flow Area	1.8	ft²
Wetted Perime	4.71	ft
Top Width	0.00	ft
Critical Depth	1.25	ft
Percent Full	100.0	%
Critical Slope	009774	ft/ft
Velocity	5.94	ft/s
Velocity Head	0.55	ft
Specific Energ	2.05	ft
Froude Numbe	0.00	
Maximum Disc	11.30	cfs
Discharge Full	10.50	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 54
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 55
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 55
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 56
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 57
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	48	in

Results		
Depth	4.00	ft
Discharge	143.64	cfs
Flow Area	12.6	ft²
Wetted Perime	12.57	ft
Top Width	0.00	ft
Critical Depth	3.54	ft
Percent Full	100.0	%
Critical Slope	008934	ft/ft
Velocity	11.43	ft/s
Velocity Head	2.03	ft
Specific Energ	6.03	ft
Froude Numbe	0.00	
Maximum Disc	154.51	cfs
Discharge Full	143.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 58
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	36	in

Results		
Depth	3.00	ft
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	0.00	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	0.00	.
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 59
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	54	in

Results		
Depth	4.50	ft
Discharge	196.64	cfs
Flow Area	15.9	ft²
Wetted Perime	14.14	ft
Top Width	0.00	ft
Critical Depth	4.01	ft
Percent Full	100.0	%
Critical Slope	008874	ft/ft
Velocity	12.36	ft/s
Velocity Head	2.38	ft
Specific Energ	6.88	ft
Froude Numbe	0.00	
Maximum Disc	211.53	cfs
Discharge Full	196.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 60
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	54	in

Results		
Depth	4.50	ft
Discharge	196.64	cfs
Flow Area	15.9	ft²
Wetted Perime	14.14	ft
Top Width	0.00	ft
Critical Depth	4.01	ft
Percent Full	100.0	%
Critical Slope	008874	ft/ft
Velocity	12.36	ft/s
Velocity Head	2.38	ft
Specific Energ	6.88	ft
Froude Numbe	0.00	
Maximum Disc	211.53	cfs
Discharge Full	196.64	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

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PIPE RUN 61
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	30	in

Results		
Depth	2.50	ft
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	0.00	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	0.00	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 62
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	60	in

Results		
Depth	5.00	ft
Discharge	260.43	cfs
Flow Area	19.6	ft²
Wetted Perime	15.71	ft
Top Width	0.00	ft
Critical Depth	4.49	ft
Percent Full	100.0	%
Critical Slope	008827	ft/ft
Velocity	13.26	ft/s
Velocity Head	2.73	ft
Specific Energ	7.73	ft
Froude Numbe	0.00	
Maximum Disc	280.14	cfs
Discharge Full	260.43	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

PIPE RUN 63
Worksheet for Circular Channel

Project Description	
Worksheet	Circular Channel
Flow Element	Circular Channel
Method	Manning's Formu
Solve For	Full Flow Capacit

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Diameter	42	in

Results		
Depth	3.50	ft
Discharge	100.60	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	0.00	ft
Critical Depth	3.08	ft
Percent Full	100.0	%
Critical Slope	009012	ft/ft
Velocity	10.46	ft/s
Velocity Head	1.70	ft
Specific Energ	5.20	ft
Froude Numbe	0.00	
Maximum Disc	108.22	cfs
Discharge Full	100.60	cfs
Slope Full	010000	ft/ft
Flow Type	N/A	

Job File: X:\920000\POND-PACK\MONUMENT-1-DEV.PPW
Rain Dir: X:\920000\POND-PACK\

==========
JOB TITLE
==========

Project Date: 8/16/2003
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

MONUMENT BRANCH DRAINAGE BASIN NORTH

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MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Dev100	4.4000	Synthetic Curve	TypeII 24hr
Dev 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
1/2 PARCEL 2	AREA	100	1.937		12.1000	24.01		
1/2 PARCEL 2	AREA	5	.670		12.1000	7.03		
1/2 PARCEL-22	AREA	100	8.036		12.0000	119.78		
1/2 PARCEL-22	AREA	5	4.308		12.0000	66.18		
1/2 PARCEL-30	AREA	100	2.560		12.2000	22.11		
1/2 PARCEL-30	AREA	5	.646		12.3000	3.16		
JUNC 10	JCT	100	7.887		12.0000	111.52		
JUNC 10	JCT	5	4.229		12.0000	61.35		
JUNC 100	JCT	100	17.791		12.1000	202.94		
JUNC 100	JCT	5	5.990		12.1500	57.01		
JUNC 110	JCT	100	95.259		12.1000	835.69		
JUNC 110	JCT	5	37.106		12.1000	248.17		
JUNC 120	JCT	100	22.454		12.0500	307.18		
JUNC 120	JCT	5	11.966		12.0500	169.33		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
JUNC 130	JCT	100	24.391		12.0500	329.89		
JUNC 130	JCT	5	12.636		12.0500	175.53		
JUNC 140	JCT	100	32.427		12.0500	442.64		
JUNC 140	JCT	5	16.944		12.0500	238.45		
JUNC 20	JCT	100	25.679		12.1000	297.05		
JUNC 20	JCT	5	10.219		12.1000	107.43		
JUNC 40	JCT	100	26.105		12.1000	300.01		
JUNC 40	JCT	5	10.326		12.1000	107.71		
JUNC 50	JCT	100	53.670		12.1000	606.53		
JUNC 50	JCT	5	19.535		12.1000	188.20		
JUNC 60	JCT	100	27.565		12.1500	306.79		
JUNC 60	JCT	5	9.209		12.1500	85.10		
JUNC 70	JCT	100	90.362		12.1000	791.55		
JUNC 70	JCT	5	35.206		12.1000	231.63		
JUNC 80	JCT	100	58.080		12.1000	661.18		
JUNC 80	JCT	5	21.059		12.1000	204.19		
JUNC 90	JCT	100	92.699		12.1000	817.92		
JUNC 90	JCT	5	36.460		12.1000	246.44		
OS-1	AREA	100	8.304		12.1500	88.97		
OS-1	AREA	5	2.711		12.2000	23.16		
OS-2	AREA	100	16.609		12.1500	177.94		
OS-2	AREA	5	5.423		12.2000	46.32		
OS-3	AREA	100	11.602		12.1500	124.30		
OS-3	AREA	5	3.788		12.2000	32.36		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
*OUT 10	JCT	100	152.182		12.1500	1256.82		
*OUT 10	JCT	5	66.626		12.1000	528.93		
PARCEL-19	AREA	100	2.338		12.0000	34.84		
PARCEL-19	AREA	5	1.253		12.0000	19.25		
PARCEL-20	AREA	100	3.214		12.0000	47.91		
PARCEL-20	AREA	5	1.723		12.0000	26.47		
PARCEL-21	AREA	100	4.673		12.0500	64.31		
PARCEL-21	AREA	5	2.506		12.0500	35.62		
PARCEL-26	AREA	100	21.199		12.0500	300.67		
PARCEL-26	AREA	5	10.620		12.0500	154.00		
PARCEL-27	AREA	100	20.682		12.0500	293.34		
PARCEL-27	AREA	5	10.361		12.0500	150.24		
PARCEL-32	AREA	100	22.198		12.0500	305.49		
PARCEL-32	AREA	5	11.902		12.0500	169.19		
PARCEL-34	AREA	100	.427		12.2000	3.69		
PARCEL-34	AREA	5	.108		12.3000	.53		
PARCEL-35	AREA	100	.256		12.2000	2.36		
PARCEL-35	AREA	5	.065		12.2500	.34		
PARCEL-6	AREA	100	4.409		12.1000	54.65		
PARCEL-6	AREA	5	1.524		12.1000	15.99		
PARCEL-7	AREA	100	9.487		12.1000	117.58		
PARCEL-7	AREA	5	3.278		12.1000	34.41		
PARCEL-9	AREA	100	10.957		12.1000	135.79		
PARCEL-9	AREA	5	3.786		12.1000	39.74		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID		Type	Return Event	HYG.Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
POND 10	IN	POND	100	152.182		12.1500	1256.82		
POND 10	IN	POND	5	66.626		12.1000	528.93		
POND 10	OUT	POND	100	152.182		12.1500	1256.82		
POND 10	OUT	POND	5	66.626		12.1000	528.93		
POND 20	IN	POND	100	32.284		12.0500	397.81		
POND 20	IN	POND	5	14.149		12.0500	172.70		
POND 20	OUT	POND	100	32.282		12.3500	158.63	6977.70	10.755
POND 20	OUT	POND	5	14.147		12.4500	46.80	6974.16	5.372
PWRS-1		AREA	100	3.297		12.0000	46.36		
PWRS-1		AREA	5	1.955		12.0000	28.16		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID		Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 2		AREA	.670		12.1000	7.03	
	1/2 PARCEL-22		AREA	4.308		12.0000	66.18	
	1/2 PARCEL-30		AREA	.646		12.3000	3.16	
	JUNC 10		JCT	4.229		12.0000	61.35	
	JUNC 100		JCT	5.990		12.1500	57.01	
	JUNC 110		JCT	37.106		12.1000	248.17	
	JUNC 120		JCT	11.966		12.0500	169.33	
	JUNC 130		JCT	12.636		12.0500	175.53	
	JUNC 140		JCT	16.944		12.0500	238.45	
	JUNC 20		JCT	10.219		12.1000	107.43	
	JUNC 40		JCT	10.326		12.1000	107.71	
	JUNC 50		JCT	19.535		12.1000	188.20	
	JUNC 60		JCT	9.209		12.1500	85.10	
	JUNC 70		JCT	35.206		12.1000	231.63	
	JUNC 80		JCT	21.059		12.1000	204.19	
	JUNC 90		JCT	36.460		12.1000	246.44	
	OS-1		AREA	2.711		12.2000	23.16	
	OS-2		AREA	5.423		12.2000	46.32	
	OS-3		AREA	3.788		12.2000	32.36	
Outfall	OUT 10		JCT	66.626		12.1000	528.93	
	PARCEL-19		AREA	1.253		12.0000	19.25	
	PARCEL-20		AREA	1.723		12.0000	26.47	
	PARCEL-21		AREA	2.506		12.0500	35.62	
	PARCEL-26		AREA	10.620		12.0500	154.00	
	PARCEL-27		AREA	10.361		12.0500	150.24	
	PARCEL-32		AREA	11.902		12.0500	169.19	
	PARCEL-34		AREA	.108		12.3000	.53	
	PARCEL-35		AREA	.065		12.2500	.34	
	PARCEL-6		AREA	1.524		12.1000	15.99	
	PARCEL-7		AREA	3.278		12.1000	34.41	
	PARCEL-9		AREA	3.786		12.1000	39.74	
	POND 10	IN	POND	66.626		12.1000	528.93	
	POND 10	OUT	POND	66.626		12.1000	528.93	

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Node ID		Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
POND 20	IN	POND	14.149		12.0500	172.70	
POND 20	OUT	POND	14.147		12.4500	46.80	6974.16
PWRS-1		AREA	1.955		12.0000	28.16	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 140	ADD	UN	10.620		12.0500	154.00	PARCEL-26
		DL	10.620		12.0500	154.00	
		DN	66.626		12.1000	528.93	POND 10 IN
DIR FRM GOLF	ADD	UN	.646		12.3000	3.16	1/2 PARCEL-30
		DL	.646		12.3000	3.16	
		DN	37.106		12.1000	248.17	JUNC 110
PIPE 1	ADD	UN	2.506		12.0500	35.62	PARCEL-21
		DL	2.506		12.0500	35.62	
		DN	4.229		12.0000	61.35	JUNC 10
PIPE 10	ADD	UN	5.423		12.2000	46.32	OS-2
		DL	5.423		12.2000	46.32	
		DN	9.209		12.1500	85.10	JUNC 60
PIPE 11	ADD	UN	3.786		12.1000	39.74	PARCEL-9
		DL	3.786		12.1000	39.74	
		DN	9.209		12.1500	85.10	JUNC 60
PIPE 12	ADD	UN	9.209		12.1500	85.10	JUNC 60
		DL	9.209		12.1500	85.10	
		DN	19.535		12.1000	188.20	JUNC 50
PIPE 13	ADD	UN	19.535		12.1000	188.20	JUNC 50
		DL	19.535		12.1000	188.20	
		DN	21.059		12.1000	204.19	JUNC 80

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 14	ADD	UN	3.788		12.2000	32.36	OS-3	
		DL	3.788		12.2000	32.36		
		DN	14.149		12.0500	172.70	POND 20	IN
PIPE 15	ADD	UN	10.361		12.0500	150.24	PARCEL-27	
		DL	10.361		12.0500	150.24		
		DN	14.149		12.0500	172.70	POND 20	IN
PIPE 16	PONDrt	UN	14.149		12.0500	172.70	POND 20	IN
PIPE 16			14.147		12.4500	46.80	POND 20	OUT
		DL	14.147		12.4500	46.80		
		DN	35.206		12.1000	231.63	JUNC 70	
PIPE 17	ADD	UN	1.524		12.1000	15.99	PARCEL-6	
		DL	1.524		12.1000	15.99		
		DN	21.059		12.1000	204.19	JUNC 80	
PIPE 18	ADD	UN	21.059		12.1000	204.19	JUNC 80	
		DL	21.059		12.1000	204.19		
		DN	35.206		12.1000	231.63	JUNC 70	
PIPE 19	ADD	UN	35.206		12.1000	231.63	JUNC 70	
		DL	35.206		12.1000	231.63		
		DN	36.460		12.1000	246.44	JUNC 90	
PIPE 2	ADD	UN	1.723		12.0000	26.47	PARCEL-20	
		DL	1.723		12.0000	26.47		
		DN	4.229		12.0000	61.35	JUNC 10	
PIPE 20	ADD	UN	1.253		12.0000	19.25	PARCEL-19	
		DL	1.253		12.0000	19.25		
		DN	36.460		12.1000	246.44	JUNC 90	
PIPE 21	ADD	UN	36.460		12.1000	246.44	JUNC 90	
		DL	36.460		12.1000	246.44		
		DN	37.106		12.1000	248.17	JUNC 110	
PIPE 22	ADD	UN	.065		12.2500	.34	PARCEL-35	
		DL	.065		12.2500	.34		
		DN	11.966		12.0500	169.33	JUNC 120	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 23	ADD	UN	11.902		12.0500	169.19	PARCEL-32	
		DL	11.902		12.0500	169.19		
		DN	11.966		12.0500	169.33	JUNC 120	
PIPE 24	ADD	UN	11.966		12.0500	169.33	JUNC 120	
		DL	11.966		12.0500	169.33		
		DN	12.636		12.0500	175.53	JUNC 130	
PIPE 25	ADD	UN	.670		12.1000	7.03	1/2 PARCEL 2	
		DL	.670		12.1000	7.03		
		DN	12.636		12.0500	175.53	JUNC 130	
PIPE 26	ADD	UN	12.636		12.0500	175.53	JUNC 130	
		DL	12.636		12.0500	175.53		
		DN	16.944		12.0500	238.45	JUNC 140	
PIPE 27	ADD	UN	4.308		12.0000	66.18	1/2 PARCEL-22	
		DL	4.308		12.0000	66.18		
		DN	16.944		12.0500	238.45	JUNC 140	
PIPE 28	ADD	UN	16.944		12.0500	238.45	JUNC 140	
		DL	16.944		12.0500	238.45		
		DN	66.626		12.1000	528.93	POND 10	IN
PIPE 29	PONDrt	UN	66.626		12.1000	528.93	POND 10	IN
PIPE 29			66.626		12.1000	528.93	POND 10	OUT
		DL	66.626		12.1000	528.93		
		DN	66.626		12.1000	528.93	OUT 10	
PIPE 3	ADD	UN	4.229		12.0000	61.35	JUNC 10	
		DL	4.229		12.0000	61.35		
		DN	10.219		12.1000	107.43	JUNC 20	
PIPE 4	ADD	UN	2.711		12.2000	23.16	OS-1	
		DL	2.711		12.2000	23.16		
		DN	5.990		12.1500	57.01	JUNC 100	
PIPE 5	ADD	UN	3.278		12.1000	34.41	PARCEL-7	
		DL	3.278		12.1000	34.41		
		DN	5.990		12.1500	57.01	JUNC 100	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 6	ADD	UN	5.990		12.1500	57.01	JUNC 100	
		DL	5.990		12.1500	57.01		
		DN	10.219		12.1000	107.43	JUNC 20	
PIPE 7	ADD	UN	10.219		12.1000	107.43	JUNC 20	
		DL	10.219		12.1000	107.43		
		DN	10.326		12.1000	107.71	JUNC 40	
PIPE 8	ADD	UN	.108		12.3000	.53	PARCEL-34	
		DL	.108		12.3000	.53		
		DN	10.326		12.1000	107.71	JUNC 40	
PIPE 9	ADD	UN	10.326		12.1000	107.71	JUNC 40	
		DL	10.326		12.1000	107.71		
		DN	19.535		12.1000	188.20	JUNC 50	
PIPE PWRS-1	ADD	UN	1.955		12.0000	28.16	PWRS-1	
		DL	1.955		12.0000	28.16		
		DN	66.626		12.1000	528.93	POND 10	IN
REACH 1	REACH	UN	37.106		12.1000	248.17	JUNC 110	
		DL	37.106		12.2500	247.61		
	(-Q)	DL	-.000		.0000	.00		
		DN	66.626		12.1000	528.93	POND 10	IN

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID		Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 2		AREA	1.937		12.1000	24.01	
	1/2 PARCEL-22		AREA	8.036		12.0000	119.78	
	1/2 PARCEL-30		AREA	2.560		12.2000	22.11	
	JUNC 10		JCT	7.887		12.0000	111.52	
	JUNC 100		JCT	17.791		12.1000	202.94	
	JUNC 110		JCT	95.259		12.1000	835.69	
	JUNC 120		JCT	22.454		12.0500	307.18	
	JUNC 130		JCT	24.391		12.0500	329.89	
	JUNC 140		JCT	32.427		12.0500	442.64	
	JUNC 20		JCT	25.679		12.1000	297.05	
	JUNC 40		JCT	26.105		12.1000	300.01	
	JUNC 50		JCT	53.670		12.1000	606.53	
	JUNC 60		JCT	27.565		12.1500	306.79	
	JUNC 70		JCT	90.362		12.1000	791.55	
	JUNC 80		JCT	58.080		12.1000	661.18	
	JUNC 90		JCT	92.699		12.1000	817.92	
	OS-1		AREA	8.304		12.1500	88.97	
	OS-2		AREA	16.609		12.1500	177.94	
	OS-3		AREA	11.602		12.1500	124.30	
Outfall	OUT 10		JCT	152.182		12.1500	1256.82	
	PARCEL-19		AREA	2.338		12.0000	34.84	
	PARCEL-20		AREA	3.214		12.0000	47.91	
	PARCEL-21		AREA	4.673		12.0500	64.31	
	PARCEL-26		AREA	21.199		12.0500	300.67	
	PARCEL-27		AREA	20.682		12.0500	293.34	
	PARCEL-32		AREA	22.198		12.0500	305.49	
	PARCEL-34		AREA	.427		12.2000	3.69	
	PARCEL-35		AREA	.256		12.2000	2.36	
	PARCEL-6		AREA	4.409		12.1000	54.65	
	PARCEL-7		AREA	9.487		12.1000	117.58	
	PARCEL-9		AREA	10.957		12.1000	135.79	
	POND 10	IN	POND	152.182		12.1500	1256.82	
	POND 10	OUT	POND	152.182		12.1500	1256.82	

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Node ID		Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
POND 20	IN	POND	32.284		12.0500	397.81	
POND 20	OUT	POND	32.282		12.3500	158.63	6977.70
PWRS-1		AREA	3.297		12.0000	46.36	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 140	ADD	UN	21.199		12.0500	300.67	PARCEL-26
		DL	21.199		12.0500	300.67	
		DN	152.182		12.1500	1256.82	POND 10 IN
DIR FRM GOLF	ADD	UN	2.560		12.2000	22.11	1/2 PARCEL-30
		DL	2.560		12.2000	22.11	
		DN	95.259		12.1000	835.69	JUNC 110
PIPE 1	ADD	UN	4.673		12.0500	64.31	PARCEL-21
		DL	4.673		12.0500	64.31	
		DN	7.887		12.0000	111.52	JUNC 10
PIPE 10	ADD	UN	16.609		12.1500	177.94	OS-2
		DL	16.609		12.1500	177.94	
		DN	27.565		12.1500	306.79	JUNC 60
PIPE 11	ADD	UN	10.957		12.1000	135.79	PARCEL-9
		DL	10.957		12.1000	135.79	
		DN	27.565		12.1500	306.79	JUNC 60
PIPE 12	ADD	UN	27.565		12.1500	306.79	JUNC 60
		DL	27.565		12.1500	306.79	
		DN	53.670		12.1000	606.53	JUNC 50
PIPE 13	ADD	UN	53.670		12.1000	606.53	JUNC 50
		DL	53.670		12.1000	606.53	
		DN	58.080		12.1000	661.18	JUNC 80

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 14	ADD	UN	11.602		12.1500	124.30	OS-3	
		DL	11.602		12.1500	124.30		
		DN	32.284		12.0500	397.81	POND 20	IN
PIPE 15	ADD	UN	20.682		12.0500	293.34	PARCEL-27	
		DL	20.682		12.0500	293.34		
		DN	32.284		12.0500	397.81	POND 20	IN
PIPE 16	PONDrt	UN	32.284		12.0500	397.81	POND 20	IN
PIPE 16			32.282		12.3500	158.63	POND 20	OUT
		DL	32.282		12.3500	158.63		
		DN	90.362		12.1000	791.55	JUNC 70	
PIPE 17	ADD	UN	4.409		12.1000	54.65	PARCEL-6	
		DL	4.409		12.1000	54.65		
		DN	58.080		12.1000	661.18	JUNC 80	
PIPE 18	ADD	UN	58.080		12.1000	661.18	JUNC 80	
		DL	58.080		12.1000	661.18		
		DN	90.362		12.1000	791.55	JUNC 70	
PIPE 19	ADD	UN	90.362		12.1000	791.55	JUNC 70	
		DL	90.362		12.1000	791.55		
		DN	92.699		12.1000	817.92	JUNC 90	
PIPE 2	ADD	UN	3.214		12.0000	47.91	PARCEL-20	
		DL	3.214		12.0000	47.91		
		DN	7.887		12.0000	111.52	JUNC 10	
PIPE 20	ADD	UN	2.338		12.0000	34.84	PARCEL-19	
		DL	2.338		12.0000	34.84		
		DN	92.699		12.1000	817.92	JUNC 90	
PIPE 21	ADD	UN	92.699		12.1000	817.92	JUNC 90	
		DL	92.699		12.1000	817.92		
		DN	95.259		12.1000	835.69	JUNC 110	
PIPE 22	ADD	UN	.256		12.2000	2.36	PARCEL-35	
		DL	.256		12.2000	2.36		
		DN	22.454		12.0500	307.18	JUNC 120	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 23	ADD	UN	22.198		12.0500	305.49	PARCEL-32	
		DL	22.198		12.0500	305.49		
		DN	22.454		12.0500	307.18	JUNC 120	
PIPE 24	ADD	UN	22.454		12.0500	307.18	JUNC 120	
		DL	22.454		12.0500	307.18		
		DN	24.391		12.0500	329.89	JUNC 130	
PIPE 25	ADD	UN	1.937		12.1000	24.01	1/2 PARCEL 2	
		DL	1.937		12.1000	24.01		
		DN	24.391		12.0500	329.89	JUNC 130	
PIPE 26	ADD	UN	24.391		12.0500	329.89	JUNC 130	
		DL	24.391		12.0500	329.89		
		DN	32.427		12.0500	442.64	JUNC 140	
PIPE 27	ADD	UN	8.036		12.0000	119.78	1/2 PARCEL-22	
		DL	8.036		12.0000	119.78		
		DN	32.427		12.0500	442.64	JUNC 140	
PIPE 28	ADD	UN	32.427		12.0500	442.64	JUNC 140	
		DL	32.427		12.0500	442.64		
		DN	152.182		12.1500	1256.82	POND 10	IN
PIPE 29	PONDrt	UN	152.182		12.1500	1256.82	POND 10	IN
PIPE 29			152.182		12.1500	1256.82	POND 10	OUT
		DL	152.182		12.1500	1256.82		
		DN	152.182		12.1500	1256.82	OUT 10	
PIPE 3	ADD	UN	7.887		12.0000	111.52	JUNC 10	
		DL	7.887		12.0000	111.52		
		DN	25.679		12.1000	297.05	JUNC 20	
PIPE 4	ADD	UN	8.304		12.1500	88.97	OS-1	
		DL	8.304		12.1500	88.97		
		DN	17.791		12.1000	202.94	JUNC 100	
PIPE 5	ADD	UN	9.487		12.1000	117.58	PARCEL-7	
		DL	9.487		12.1000	117.58		
		DN	17.791		12.1000	202.94	JUNC 100	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 6	ADD	UN	17.791		12.1000	202.94	JUNC 100	
		DL	17.791		12.1000	202.94		
		DN	25.679		12.1000	297.05	JUNC 20	
PIPE 7	ADD	UN	25.679		12.1000	297.05	JUNC 20	
		DL	25.679		12.1000	297.05		
		DN	26.105		12.1000	300.01	JUNC 40	
PIPE 8	ADD	UN	.427		12.2000	3.69	PARCEL-34	
		DL	.427		12.2000	3.69		
		DN	26.105		12.1000	300.01	JUNC 40	
PIPE 9	ADD	UN	26.105		12.1000	300.01	JUNC 40	
		DL	26.105		12.1000	300.01		
		DN	53.670		12.1000	606.53	JUNC 50	
PIPE PWRS-1	ADD	UN	3.297		12.0000	46.36	PWRS-1	
		DL	3.297		12.0000	46.36		
		DN	152.182		12.1500	1256.82	POND 10	IN
REACH 1	REACH	UN	95.259		12.1000	835.69	JUNC 110	
		DL	95.259		12.2500	832.14		
	(-Q)	DL	-.000		.0000	.00		
		DN	152.182		12.1500	1256.82	POND 10	IN

Type.... Design Storms
Name.... COLO SPRGS

File.... X:\920000\POND-PACK\
Title... Project Date: 8/16/2003
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

MONUMENT BRANCH DRAINAGE BASIN NORTH

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2000 hrs

Total Tc: .2000 hrs

Type.... Tc Calcs
Name.... 1/2 PARCEL-30

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .4166 hrs

Total Tc: .4166 hrs

Type.... Tc Calcs
Name.... OS-2

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .4166 hrs

Total Tc: .4166 hrs

Type.... Tc Calcs
Name.... OS-3

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .4166 hrs

Total Tc: .4166 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2000 hrs

Total Tc: .2000 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2000 hrs

Total Tc: .2000 hrs

Type.... Tc Calcs
Name.... PARCEL-21

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

Type.... Tc Calcs
Name.... PARCEL-32

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .4500 hrs

Total Tc: .4500 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .1667 hrs

Total Tc: .1667 hrs

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 110 Dev 5
Outflow HYG file-ID = work_pad.hyg - REACH 1 Dev 5

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .1350 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 3 to 2 subreaches.

Time Step = .0500 hrs
Muskingum K = .1350 hrs (Each subreach K = .0675 hrs)
Muskingum X = .50000

Subreaches = 2
(Range = 3 to 2 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	5.1500 hrs	5.1500 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	68.2500 hrs	68.2500 hrs
Peak Time....	12.1000 hrs	12.2500 hrs
Peak Flow....	248.17 cfs	247.61 cfs

Inflow/Outflow Volumes

Inflow	=	37.106 ac-ft
- Unrouted	=	.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	37.106 ac-ft

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 110 Dev100
Outflow HYG file-ID = work_pad.hyg - REACH 1 Dev100

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .1350 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 3 to 2 subreaches.

Time Step = .0500 hrs
Muskingum K = .1350 hrs (Each subreach K = .0675 hrs)
Muskingum X = .50000

Subreaches = 2
(Range = 3 to 2 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	3.4500 hrs	3.4500 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	69.4000 hrs	69.4000 hrs
Peak Time....	12.1000 hrs	12.2500 hrs
Peak Flow....	835.69 cfs	832.14 cfs

Inflow/Outflow Volumes

Inflow	=	95.259 ac-ft
- Unrouted	=	-.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	95.259 ac-ft

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
6970.00	-----	1.1720	.0000	.000	.000
6978.00	-----	1.6550	4.2197	11.253	11.253
6980.00	-----	1.8340	5.2312	3.487	14.740

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 6970.00 ft
Increment = .50 ft
Max. Elev.= 6980.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	CV	--->	TW	6974.000	6980.000
Culvert-Circular	CV	--->	TW	6970.000	6980.000

TW SETUP, DS Channel

File.... X:\920000\POND-PACK\MONUMENT-1-DEV.PPW

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Stand Pipe

# of Openings	=	1	
Invert Elev.	=	6974.00	ft
Diameter	=	3.5000	ft
Orifice Area	=	9.6211	sq.ft
Orifice Coeff.	=	.600	
Weir Length	=	11.00	ft
Weir Coeff.	=	4.000	
K, Submerged	=	.000	
K, Reverse	=	1.000	
Kb,Barrel	=	.000000	(per ft of full flow)
Barrel Length	=	.00	ft
Mannings n	=	.0000	

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels	=	1
Barrel Diameter	=	2.5000 ft
Upstream Invert	=	6970.00 ft
Dnstream Invert	=	6965.00 ft
Horiz. Length	=	20.00 ft
Barrel Length	=	20.62 ft
Barrel Slope	=	.25000 ft/ft

OUTLET CONTROL DATA...

Mannings n	=	.0130	
Ke	=	.5000	(forward entrance loss)
Kb	=	.009217	(per ft of full flow)
Kr	=	.5000	(reverse entrance loss)
HW Convergence	=	.001	+/- ft

INLET CONTROL DATA...

Equation form	=	1
Inlet Control K	=	.0078
Inlet Control M	=	2.0000
Inlet Control c	=	.02920
Inlet Control Y	=	.7400
T1 ratio (HW/D)	=	1.123
T2 ratio (HW/D)	=	1.195
Slope Factor	=	-.050

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 6972.81 ft ---> Flow = 27.16 cfs
At T2 Elev = 6972.99 ft ---> Flow = 31.05 cfs

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

Maximum Iterations=	30
Min. TW tolerance =	.01 ft
Max. TW tolerance =	.01 ft
Min. HW tolerance =	.01 ft
Max. HW tolerance =	.01 ft
Min. Q tolerance =	.10 cfs
Max. Q tolerance =	.10 cfs

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1/2 PARCEL-22... 4.03
1/2 PARCEL-30... 4.05

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2.09

Type.... Target Outflow Volume Estimates
Name.... POND 10

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

Pond Surface Area Estimate

Pond Depth:	8.00	ft
Freeboard Depth:	2.00	ft
Total Pond Depth:	10.00	ft
Side Slope:	4.00	H:V

Volume up to Freeboard Elevation:	21.852	ac-ft
Volume From Freeboard to Top of Pond:	6.392	ac-ft
Total Pond Volume:	28.244	ac-ft

Top Pond Elevation:	6980.00	ft
Top Surface Area:	3.318	acres
Freeboard Elevation:	6978.00	ft
Freeboard Surface Area:	3.075	acres
Bottom Elevation:	6970.00	ft
Bottom Surface Area:	2.402	acres

Job File: X:\920000\POND-PACK\MONUMENT-2-DEV.PPW
Rain Dir: X:\920000\POND-PACK\

==========
JOB TITLE
==========

Project Date: 8/19/2002
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

MONUMENT BRANCH DRAINAGE BASIN SOUTH

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MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Dev100	4.4000	Synthetic Curve	TypeII 24hr
Dev 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
1/2 PARCEL 22	AREA	100	1.899		12.0500	26.13		
1/2 PARCEL 22	AREA	5	1.018		12.0500	14.47		
1/2 PARCEL-1	AREA	100	7.082		12.1000	87.77		
1/2 PARCEL-1	AREA	5	2.447		12.1000	25.69		
1/2 PARCEL-2	AREA	100	2.739		12.1000	33.95		
1/2 PARCEL-2	AREA	5	.947		12.1000	9.94		
1/2 PARCEL-30	AREA	100	3.925		12.2000	33.91		
1/2 PARCEL-30	AREA	5	.991		12.3000	4.84		
JUNC 10	JCT	100	51.741		12.3000	141.94		
JUNC 10	JCT	5	23.415		12.7000	34.07		
JUNC 100	JCT	100	17.030		12.0500	239.36		
JUNC 100	JCT	5	8.254		12.0500	117.56		
JUNC 20	JCT	100	56.561		12.3500	180.77		
JUNC 20	JCT	5	24.631		12.7500	37.73		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
JUNC 30	JCT	100	4.821		12.2000	41.65		
JUNC 30	JCT	5	1.217		12.3000	5.95		
JUNC 60	JCT	100	5.369		12.1000	68.64		
JUNC 60	JCT	5	1.974		12.1000	22.77		
JUNC 70	JCT	100	9.294		12.1000	95.88		
JUNC 70	JCT	5	2.965		12.1000	25.43		
JUNC 80	JCT	100	14.719		12.0500	194.04		
JUNC 80	JCT	5	6.001		12.0500	74.54		
JUNC 90	JCT	100	7.637		12.0500	111.03		
JUNC 90	JCT	5	3.554		12.0500	51.88		
*OUT 10	JCT	100	80.607		12.4500	268.18		
*OUT 10	JCT	5	34.129		12.5500	63.23		
PARCEL 11	AREA	100	2.630		12.1000	34.69		
PARCEL 11	AREA	5	1.027		12.1000	12.84		
PARCEL 15	AREA	100	.776		12.2000	7.85		
PARCEL 15	AREA	5	.389		12.2000	3.98		
PARCEL 30	AREA	100	4.821		12.2000	41.65		
PARCEL 30	AREA	5	1.217		12.3000	5.95		
PARCEL-12	AREA	100	1.972		12.1000	26.02		
PARCEL-12	AREA	5	.770		12.1000	9.63		
PARCEL-16	AREA	100	2.112		12.1000	26.60		
PARCEL-16	AREA	5	1.004		12.1000	12.72		
PARCEL-18	AREA	100	2.467		12.0000	38.25		
PARCEL-18	AREA	5	.964		12.0500	14.32		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID		Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
PARCEL-24		AREA	100	7.756		12.0500	110.00		
PARCEL-24		AREA	5	3.885		12.0500	56.34		
PARCEL-25		AREA	100	16.255		12.0500	232.84		
PARCEL-25		AREA	5	7.865		12.0500	114.36		
PARCEL-30-2		AREA	100	4.821		12.2000	41.65		
PARCEL-30-2		AREA	5	1.217		12.3000	5.95		
PARCEL-31		AREA	100	5.171		12.0500	73.33		
PARCEL-31		AREA	5	2.590		12.0500	37.56		
PARCEL-8		AREA	100	7.215		12.1000	89.42		
PARCEL-8		AREA	5	2.493		12.1000	26.17		
POND 10	IN	POND	100	46.973		12.0500	601.34		
POND 10	IN	POND	5	22.243		12.0500	288.22		
POND 10	OUT	POND	100	46.920		12.5500	106.63	6978.20	22.472
POND 10	OUT	POND	5	22.197		12.9000	30.81	6974.50	11.631
POND 20	IN	POND	100	80.608		12.1500	360.01		
POND 20	IN	POND	5	34.130		12.1000	120.68		
POND 20	OUT	POND	100	80.607		12.4500	268.18	6828.56	21.856
POND 20	OUT	POND	5	34.129		12.5500	63.23	6826.97	16.934
PWRS-2		AREA	100	5.205		12.0000	73.20		
PWRS-2		AREA	5	3.087		12.0000	44.46		
PWRS-3		AREA	100	3.817		12.0000	53.68		
PWRS-3		AREA	5	2.264		12.0000	32.60		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID		Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 22		AREA	1.018		12.0500	14.47	
	1/2 PARCEL-1		AREA	2.447		12.1000	25.69	
	1/2 PARCEL-2		AREA	.947		12.1000	9.94	
	1/2 PARCEL-30		AREA	.991		12.3000	4.84	
	JUNC 10		JCT	23.415		12.7000	34.07	
	JUNC 100		JCT	8.254		12.0500	117.56	
	JUNC 20		JCT	24.631		12.7500	37.73	
	JUNC 30		JCT	1.217		12.3000	5.95	
	JUNC 60		JCT	1.974		12.1000	22.77	
	JUNC 70		JCT	2.965		12.1000	25.43	
	JUNC 80		JCT	6.001		12.0500	74.54	
	JUNC 90		JCT	3.554		12.0500	51.88	
Outfall	OUT 10		JCT	34.129		12.5500	63.23	
	PARCEL 11		AREA	1.027		12.1000	12.84	
	PARCEL 15		AREA	.389		12.2000	3.98	
	PARCEL 30		AREA	1.217		12.3000	5.95	
	PARCEL-12		AREA	.770		12.1000	9.63	
	PARCEL-16		AREA	1.004		12.1000	12.72	
	PARCEL-18		AREA	.964		12.0500	14.32	
	PARCEL-24		AREA	3.885		12.0500	56.34	
	PARCEL-25		AREA	7.865		12.0500	114.36	
	PARCEL-30-2		AREA	1.217		12.3000	5.95	
	PARCEL-31		AREA	2.590		12.0500	37.56	
	PARCEL-8		AREA	2.493		12.1000	26.17	
	POND 10	IN	POND	22.243		12.0500	288.22	
	POND 10	OUT	POND	22.197		12.9000	30.81	6974.50
	POND 20	IN	POND	34.130		12.1000	120.68	
	POND 20	OUT	POND	34.129		12.5500	63.23	6826.97
	PWRS-2		AREA	3.087		12.0000	44.46	
	PWRS-3		AREA	2.264		12.0000	32.60	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 20	ADD	UN	1.217		12.3000	5.95	PARCEL 30
		DL	1.217		12.3000	5.95	
		DN	1.217		12.3000	5.95	JUNC 30
ADDLINK 200	ADD	UN	1.018		12.0500	14.47	1/2 PARCEL 22
		DL	1.018		12.0500	14.47	
		DN	22.243		12.0500	288.22	POND 10 IN
ADDLINK 40	ADD	UN	7.865		12.0500	114.36	PARCEL-25
		DL	7.865		12.0500	114.36	
		DN	8.254		12.0500	117.56	JUNC 100
ADDLINK 50	ADD	UN	.389		12.2000	3.98	PARCEL 15
		DL	.389		12.2000	3.98	
		DN	8.254		12.0500	117.56	JUNC 100
ADDLINK 80	ADD	UN	1.217		12.3000	5.95	PARCEL-30-2
		DL	1.217		12.3000	5.95	
		DN	23.415		12.7000	34.07	JUNC 10
PIPE 30	ADD	UN	1.027		12.1000	12.84	PARCEL 11
		DL	1.027		12.1000	12.84	
		DN	1.974		12.1000	22.77	JUNC 60
PIPE 31	ADD	UN	.947		12.1000	9.94	1/2 PARCEL-2
		DL	.947		12.1000	9.94	
		DN	1.974		12.1000	22.77	JUNC 60

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 32	ADD	UN	1.974		12.1000	22.77	JUNC 60	
		DL	1.974		12.1000	22.77		
		DN	2.965		12.1000	25.43	JUNC 70	
PIPE 33	ADD	UN	.991		12.3000	4.84	1/2 PARCEL-30	
		DL	.991		12.3000	4.84		
		DN	2.965		12.1000	25.43	JUNC 70	
PIPE 34	ADD	UN	2.965		12.1000	25.43	JUNC 70	
		DL	2.965		12.1000	25.43		
		DN	22.243		12.0500	288.22	POND 10	IN
PIPE 35	ADD	UN	.770		12.1000	9.63	PARCEL-12	
		DL	.770		12.1000	9.63		
		DN	22.243		12.0500	288.22	POND 10	IN
PIPE 36	ADD	UN	3.885		12.0500	56.34	PARCEL-24	
		DL	3.885		12.0500	56.34		
		DN	22.243		12.0500	288.22	POND 10	IN
PIPE 37	ADD	UN	8.254		12.0500	117.56	JUNC 100	
		DL	8.254		12.0500	117.56		
		DN	22.243		12.0500	288.22	POND 10	IN
PIPE 38	PONDrt	UN	22.243		12.0500	288.22	POND 10	IN
PIPE 38			22.197		12.9000	30.81	POND 10	OUT
		DL	22.197		12.9000	30.81		
		DN	23.415		12.7000	34.07	JUNC 10	
PIPE 39	ADD	UN	.964		12.0500	14.32	PARCEL-18	
		DL	.964		12.0500	14.32		
		DN	3.554		12.0500	51.88	JUNC 90	
PIPE 40	ADD	UN	2.590		12.0500	37.56	PARCEL-31	
		DL	2.590		12.0500	37.56		
		DN	3.554		12.0500	51.88	JUNC 90	
PIPE 41	ADD	UN	3.554		12.0500	51.88	JUNC 90	
		DL	3.554		12.0500	51.88		
		DN	6.001		12.0500	74.54	JUNC 80	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 42	ADD	UN	2.447		12.1000	25.69	1/2 PARCEL-1	
		DL	2.447		12.1000	25.69		
		DN	6.001		12.0500	74.54	JUNC 80	
PIPE 43	ADD	UN	6.001		12.0500	74.54	JUNC 80	
		DL	6.001		12.0500	74.54		
		DN	34.130		12.1000	120.68	POND 20	IN
PIPE 44	ADD	UN	1.004		12.1000	12.72	PARCEL-16	
		DL	1.004		12.1000	12.72		
		DN	34.130		12.1000	120.68	POND 20	IN
PIPE 45	ADD	UN	2.493		12.1000	26.17	PARCEL-8	
		DL	2.493		12.1000	26.17		
		DN	34.130		12.1000	120.68	POND 20	IN
PIPE 46	PONDrt	UN	34.130		12.1000	120.68	POND 20	IN
PIPE 46			34.129		12.5500	63.23	POND 20	OUT
		DL	34.129		12.5500	63.23		
		DN	34.129		12.5500	63.23	OUT 10	
PIPE PWRS-2	ADD	UN	3.087		12.0000	44.46	PWRS-2	
		DL	3.087		12.0000	44.46		
		DN	22.243		12.0500	288.22	POND 10	IN
PIPE PWRS-3	ADD	UN	2.264		12.0000	32.60	PWRS-3	
		DL	2.264		12.0000	32.60		
		DN	22.243		12.0500	288.22	POND 10	IN
REACH 2	REACH	UN	23.415		12.7000	34.07	JUNC 10	
		DL	23.414		12.8500	34.08		
	(-Q)	DL	-.000		.0000	.00		
		DN	24.631		12.7500	37.73	JUNC 20	
REACH 3	REACH	UN	1.217		12.3000	5.95	JUNC 30	
		DL	1.217		12.4000	5.94		
	(-Q)	DL	-.000		11.8500	-.00		
		DN	24.631		12.7500	37.73	JUNC 20	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
REACH 4	REACH	UN	24.631		12.7500	37.73	JUNC 20	
		DL	24.631		12.7500	37.71		
		DN	34.130		12.1000	120.68	POND 20	IN

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID		Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 22		AREA	1.899		12.0500	26.13	
	1/2 PARCEL-1		AREA	7.082		12.1000	87.77	
	1/2 PARCEL-2		AREA	2.739		12.1000	33.95	
	1/2 PARCEL-30		AREA	3.925		12.2000	33.91	
	JUNC 10		JCT	51.741		12.3000	141.94	
	JUNC 100		JCT	17.030		12.0500	239.36	
	JUNC 20		JCT	56.561		12.3500	180.77	
	JUNC 30		JCT	4.821		12.2000	41.65	
	JUNC 60		JCT	5.369		12.1000	68.64	
	JUNC 70		JCT	9.294		12.1000	95.88	
	JUNC 80		JCT	14.719		12.0500	194.04	
	JUNC 90		JCT	7.637		12.0500	111.03	
Outfall	OUT 10		JCT	80.607		12.4500	268.18	
	PARCEL 11		AREA	2.630		12.1000	34.69	
	PARCEL 15		AREA	.776		12.2000	7.85	
	PARCEL 30		AREA	4.821		12.2000	41.65	
	PARCEL-12		AREA	1.972		12.1000	26.02	
	PARCEL-16		AREA	2.112		12.1000	26.60	
	PARCEL-18		AREA	2.467		12.0000	38.25	
	PARCEL-24		AREA	7.756		12.0500	110.00	
	PARCEL-25		AREA	16.255		12.0500	232.84	
	PARCEL-30-2		AREA	4.821		12.2000	41.65	
	PARCEL-31		AREA	5.171		12.0500	73.33	
	PARCEL-8		AREA	7.215		12.1000	89.42	
	POND 10	IN	POND	46.973		12.0500	601.34	
	POND 10	OUT	POND	46.920		12.5500	106.63	6978.20
	POND 20	IN	POND	80.608		12.1500	360.01	
	POND 20	OUT	POND	80.607		12.4500	268.18	6828.56
	PWRS-2		AREA	5.205		12.0000	73.20	
	PWRS-3		AREA	3.817		12.0000	53.68	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 20	ADD	UN	4.821		12.2000	41.65	PARCEL 30
		DL	4.821		12.2000	41.65	
		DN	4.821		12.2000	41.65	JUNC 30
ADDLINK 200	ADD	UN	1.899		12.0500	26.13	1/2 PARCEL 22
		DL	1.899		12.0500	26.13	
		DN	46.973		12.0500	601.34	POND 10 IN
ADDLINK 40	ADD	UN	16.255		12.0500	232.84	PARCEL-25
		DL	16.255		12.0500	232.84	
		DN	17.030		12.0500	239.36	JUNC 100
ADDLINK 50	ADD	UN	.776		12.2000	7.85	PARCEL 15
		DL	.776		12.2000	7.85	
		DN	17.030		12.0500	239.36	JUNC 100
ADDLINK 80	ADD	UN	4.821		12.2000	41.65	PARCEL-30-2
		DL	4.821		12.2000	41.65	
		DN	51.741		12.3000	141.94	JUNC 10
PIPE 30	ADD	UN	2.630		12.1000	34.69	PARCEL 11
		DL	2.630		12.1000	34.69	
		DN	5.369		12.1000	68.64	JUNC 60
PIPE 31	ADD	UN	2.739		12.1000	33.95	1/2 PARCEL-2
		DL	2.739		12.1000	33.95	
		DN	5.369		12.1000	68.64	JUNC 60

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 32	ADD	UN	5.369		12.1000	68.64	JUNC 60	
		DL	5.369		12.1000	68.64		
		DN	9.294		12.1000	95.88	JUNC 70	
PIPE 33	ADD	UN	3.925		12.2000	33.91	1/2 PARCEL-30	
		DL	3.925		12.2000	33.91		
		DN	9.294		12.1000	95.88	JUNC 70	
PIPE 34	ADD	UN	9.294		12.1000	95.88	JUNC 70	
		DL	9.294		12.1000	95.88		
		DN	46.973		12.0500	601.34	POND 10	IN
PIPE 35	ADD	UN	1.972		12.1000	26.02	PARCEL-12	
		DL	1.972		12.1000	26.02		
		DN	46.973		12.0500	601.34	POND 10	IN
PIPE 36	ADD	UN	7.756		12.0500	110.00	PARCEL-24	
		DL	7.756		12.0500	110.00		
		DN	46.973		12.0500	601.34	POND 10	IN
PIPE 37	ADD	UN	17.030		12.0500	239.36	JUNC 100	
		DL	17.030		12.0500	239.36		
		DN	46.973		12.0500	601.34	POND 10	IN
PIPE 38	PONDrt	UN	46.973		12.0500	601.34	POND 10	IN
PIPE 38			46.920		12.5500	106.63	POND 10	OUT
		DL	46.919		12.5500	106.63		
		DN	51.741		12.3000	141.94	JUNC 10	
PIPE 39	ADD	UN	2.467		12.0000	38.25	PARCEL-18	
		DL	2.467		12.0000	38.25		
		DN	7.637		12.0500	111.03	JUNC 90	
PIPE 40	ADD	UN	5.171		12.0500	73.33	PARCEL-31	
		DL	5.171		12.0500	73.33		
		DN	7.637		12.0500	111.03	JUNC 90	
PIPE 41	ADD	UN	7.637		12.0500	111.03	JUNC 90	
		DL	7.637		12.0500	111.03		
		DN	14.719		12.0500	194.04	JUNC 80	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 42	ADD	UN	7.082		12.1000	87.77	1/2 PARCEL-1	
		DL	7.082		12.1000	87.77		
		DN	14.719		12.0500	194.04	JUNC 80	
PIPE 43	ADD	UN	14.719		12.0500	194.04	JUNC 80	
		DL	14.719		12.0500	194.04		
		DN	80.608		12.1500	360.01	POND 20	IN
PIPE 44	ADD	UN	2.112		12.1000	26.60	PARCEL-16	
		DL	2.112		12.1000	26.60		
		DN	80.608		12.1500	360.01	POND 20	IN
PIPE 45	ADD	UN	7.215		12.1000	89.42	PARCEL-8	
		DL	7.215		12.1000	89.42		
		DN	80.608		12.1500	360.01	POND 20	IN
PIPE 46	PONDrt	UN	80.608		12.1500	360.01	POND 20	IN
PIPE 46			80.607		12.4500	268.18	POND 20	OUT
		DL	80.607		12.4500	268.18		
		DN	80.607		12.4500	268.18	OUT 10	
PIPE PWRS-2	ADD	UN	5.205		12.0000	73.20	PWRS-2	
		DL	5.205		12.0000	73.20		
		DN	46.973		12.0500	601.34	POND 10	IN
PIPE PWRS-3	ADD	UN	3.817		12.0000	53.68	PWRS-3	
		DL	3.817		12.0000	53.68		
		DN	46.973		12.0500	601.34	POND 10	IN
REACH 2	REACH	UN	51.741		12.3000	141.94	JUNC 10	
		DL	51.740		12.4000	142.01		
		DN	56.561		12.3500	180.77	JUNC 20	
REACH 3	REACH	UN	4.821		12.2000	41.65	JUNC 30	
		DL	4.821		12.3000	41.45		
	(-Q)	DL	-.000		11.6500	-.00		
		DN	56.561		12.3500	180.77	JUNC 20	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
REACH 4	REACH	UN	56.561		12.3500	180.77	JUNC 20	
		DL	56.561		12.4000	180.79		
		DN	80.608		12.1500	360.01	POND 20	IN

File.... X:\920000\POND-PACK\
Title... Project Date: 8/19/2002
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

MONUMENT BRANCH DRAINAGE BASIN SOUTH

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3000 hrs

Total Tc: .3000 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: User Defined

Segment #1 Time: .3000 hrs

Total Tc: .3000 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3330 hrs

Total Tc: .3330 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2000 hrs

Total Tc: .2000 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .1667 hrs

Total Tc: .1667 hrs

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .1667 hrs

Total Tc: .1667 hrs

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 10 Dev 5
Outflow HYG file-ID = work_pad.hyg - REACH 2 Dev 5

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .1181 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 3 to 2 subreaches.

Time Step = .0500 hrs
Muskingum K = .1181 hrs (Each subreach K = .0591 hrs)
Muskingum X = .50000

Subreaches = 2
(Range = 3 to 2 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	1.9000 hrs	1.9000 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	101.4500 hrs	101.4500 hrs
Peak Time....	12.7000 hrs	12.8500 hrs
Peak Flow....	34.07 cfs	34.08 cfs

Inflow/Outflow Volumes

Inflow	=	23.415 ac-ft
- Unrouted	=	.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	23.414 ac-ft

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 10 Dev100
Outflow HYG file-ID = work_pad.hyg - REACH 2 Dev100

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .1181 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 3 to 2 subreaches.

Time Step = .0500 hrs
Muskingum K = .1181 hrs (Each subreach K = .0591 hrs)
Muskingum X = .50000

Subreaches = 2
(Range = 3 to 2 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	1.2500 hrs	1.2500 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	100.9000 hrs	100.9000 hrs
Peak Time....	12.3000 hrs	12.4000 hrs
Peak Flow....	141.94 cfs	142.01 cfs

Inflow/Outflow Volumes

Inflow	=	51.741 ac-ft
- Unrouted	=	.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	51.740 ac-ft

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 30 Dev 5
Outflow HYG file-ID = work_pad.hyg - REACH 3 Dev 5

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .0705 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 2 to 1 subreaches.

Time Step = .0500 hrs
Muskingum K = .0705 hrs
Muskingum X = .50000

Subreaches = 1
(Range = 2 to 1 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	11.8000 hrs	11.8000 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	25.4500 hrs	25.4500 hrs
Peak Time....	12.3000 hrs	12.4000 hrs
Peak Flow....	5.95 cfs	5.94 cfs

Inflow/Outflow Volumes

Inflow	=	1.217 ac-ft
- Unrouted	=	-.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	1.217 ac-ft

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 30 Dev100
Outflow HYG file-ID = work_pad.hyg - REACH 3 Dev100

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .0705 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 2 to 1 subreaches.

Time Step = .0500 hrs
Muskingum K = .0705 hrs
Muskingum X = .50000

Subreaches = 1
(Range = 2 to 1 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	11.5000 hrs	11.5000 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	25.5000 hrs	25.5000 hrs
Peak Time....	12.2000 hrs	12.3000 hrs
Peak Flow....	41.65 cfs	41.45 cfs

Inflow/Outflow Volumes

Inflow	=	4.821 ac-ft
- Unrouted	=	-.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	4.821 ac-ft

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 20 Dev 5
Outflow HYG file-ID = work_pad.hyg - REACH 4 Dev 5

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .0367 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 0 to 0 subreaches.

Time Step = .0500 hrs
Muskingum K = .0367 hrs
Muskingum X = .50000

Subreaches = 1
(Range = 0 to 0 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	2.0500 hrs	2.0500 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	101.4500 hrs	101.4500 hrs
Peak Time....	12.7500 hrs	12.7500 hrs
Peak Flow....	37.73 cfs	37.71 cfs

Inflow/Outflow Volumes

Inflow	=	24.631 ac-ft
- Unrouted	=	.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	24.631 ac-ft

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 20 Dev100
Outflow HYG file-ID = work_pad.hyg - REACH 4 Dev100

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .0367 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 0 to 0 subreaches.

Time Step = .0500 hrs
Muskingum K = .0367 hrs
Muskingum X = .50000

Subreaches = 1
(Range = 0 to 0 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	1.3500 hrs	1.3500 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	100.9000 hrs	100.9000 hrs
Peak Time....	12.3500 hrs	12.4000 hrs
Peak Flow....	180.77 cfs	180.79 cfs

Inflow/Outflow Volumes

Inflow	=	56.561 ac-ft
- Unrouted	=	.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	56.561 ac-ft

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
6970.00	-----	2.4020	.0000	.000	.000
6978.00	-----	3.0750	8.1947	21.853	21.853
6980.00	-----	3.1800	9.3821	6.255	28.107

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
6820.00	-----	1.3900	.0000	.000	.000
6822.00	-----	2.3600	5.5612	3.707	3.707
6824.00	-----	2.6000	7.4371	4.958	8.666
6826.00	-----	2.8500	8.1721	5.448	14.114
6828.00	-----	3.1200	8.9519	5.968	20.082
6830.00	-----	3.4100	9.7918	6.528	26.609

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 6970.00 ft
Increment = .50 ft
Max. Elev.= 6980.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	CV	--->	TW	6974.000	6980.000
Culvert-Circular	CV	--->	TW	6970.000	6980.000

TW SETUP, DS Channel

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

OUTLET STRUCTURE INPUT DATA

Structure ID	= CV	
Structure Type	= Stand Pipe	
# of Openings	= 1	
Invert Elev.	= 6974.00	ft
Diameter	= 3.5000	ft
Orifice Area	= 9.6211	sq.ft
Orifice Coeff.	= .500	
Weir Length	= 11.00	ft
Weir Coeff.	= 3.000	
K, Submerged	= .000	
K, Reverse	= 1.000	
Kb,Barrel	= .000000	(per ft of full flow)
Barrel Length	= .00	ft
Mannings n	= .0000	

OUTLET STRUCTURE INPUT DATA

```
Structure ID      = CV
Structure Type    = Culvert-Circular
------------------------------------
No. Barrels       =         1
Barrel Diameter   =    1.5000 ft
Upstream Invert   =   6970.00 ft
Dnstream Invert   =   6965.00 ft
Horiz. Length     =     20.00 ft
Barrel Length     =     20.62 ft
Barrel Slope      =    .25000 ft/ft

OUTLET CONTROL DATA...
Mannings n        =      .0130
Ke                =      .5000  (forward entrance loss)
Kb                =    .018213  (per ft of full flow)
Kr                =      .5000  (reverse entrance loss)
HW Convergence    =       .001  +/- ft

INLET CONTROL DATA...
Equation form     =          1
Inlet Control K   =      .0078
Inlet Control M   =     2.0000
Inlet Control c   =     .02920
Inlet Control Y   =      .7400
T1 ratio (HW/D)   =      1.123
T2 ratio (HW/D)   =      1.195
Slope Factor      =      -.050

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use   submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...
At T1 Elev =   6971.69 ft  --->  Flow =       7.58 cfs
At T2 Elev =   6971.79 ft  --->  Flow =       8.66 cfs


Structure ID      = TW
Structure Type    = TW SETUP, DS Channel
------------------------------------
FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations=    30
Min. TW tolerance =    .01 ft
Max. TW tolerance =    .01 ft
Min. HW tolerance =    .01 ft
Max. HW tolerance =    .01 ft
Min.  Q tolerance =    .10 cfs
Max.  Q tolerance =    .10 cfs
```

File.... X:\920000\POND-PACK\MONUMENT-2-DEV.PPW

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 6820.00 ft
Increment = .50 ft
Max. Elev.= 6830.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	SP	--->	TW	6826.000	6830.000
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

Structure ID = SP
Structure Type = Stand Pipe

# of Openings	=	1
Invert Elev.	=	6826.00 ft
Diameter	=	7.0000 ft
Orifice Area	=	38.4845 sq.ft
Orifice Coeff.	=	.600
Weir Length	=	21.99 ft
Weir Coeff.	=	3.000
K, Submerged	=	.000
K, Reverse	=	1.000
Kb,Barrel	=	.000000 (per ft of full flow)
Barrel Length	=	.00 ft
Mannings n	=	.0000

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

Maximum Iterations	=	30
Min. TW tolerance	=	.01 ft
Max. TW tolerance	=	.01 ft
Min. HW tolerance	=	.01 ft
Max. HW tolerance	=	.01 ft
Min. Q tolerance	=	.10 cfs
Max. Q tolerance	=	.10 cfs

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==========
JOB TITLE
==========

Project Date: 8/19/2002
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

BLACK SQUIRREL CREEK DRAINAGE BASIN

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MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Dev100	4.4000	Synthetic Curve	TypeII 24hr
Dev 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
1/2 PARCEL 28	AREA	100	1.536		12.2000	13.27		
1/2 PARCEL 28	AREA	5	.388		12.3000	1.90		
1/2 PARCEL 3	AREA	100	4.138		12.1000	51.00		
1/2 PARCEL 3	AREA	5	1.430		12.1000	14.91		
1/2 PARCEL 3 SOU	AREA	100	2.539		12.1000	31.46		
1/2 PARCEL 3 SOU	AREA	5	.877		12.1000	9.21		
1/2 PARCEL-33	AREA	100	.512		12.2000	4.42		
1/2 PARCEL-33	AREA	5	.129		12.3000	.63		
1/2 PARCEL-4	AREA	100	3.675		12.1000	45.59		
1/2 PARCEL-4	AREA	5	1.270		12.1000	13.35		
1/2 PARCEL-5	AREA	100	4.405		12.1000	54.29		
1/2 PARCEL-5	AREA	5	1.523		12.1000	15.87		
JUNC 10	JCT	100	4.917		12.1000	57.85		
JUNC 10	JCT	5	1.652		12.1500	16.30		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; #Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
JUNC 20	JCT	100	8.592		12.1000	103.44		
JUNC 20	JCT	5	2.922		12.1500	29.57		
JUNC 30	JCT	100	12.731		12.1000	154.44		
JUNC 30	JCT	5	4.352		12.1000	44.47		
JUNC 60	JCT	100	35.010		12.2500	165.50		
JUNC 60	JCT	5	15.264		12.4500	39.85		
JUNC 80	JCT	100	18.577		12.1000	233.56		
JUNC 80	JCT	5	8.913		12.1000	112.40		
*OUT 20	JCT	100	47.741		12.2000	259.34		
*OUT 20	JCT	5	19.616		12.2000	73.28		
PARCEL 29 WEST	AREA	100	3.669		12.2500	30.06		
PARCEL 29 WEST	AREA	5	.926		12.3500	4.37		
PARCEL-10	AREA	100	3.123		12.1000	41.19		
PARCEL-10	AREA	5	1.220		12.1000	15.25		
PARCEL-23	AREA	100	16.039		12.1000	202.09		
PARCEL-23	AREA	5	8.035		12.1000	103.19		
PARCEL-29 EAST	AREA	100	2.901		12.2500	23.77		
PARCEL-29 EAST	AREA	5	.732		12.3500	3.45		
POND 20 IN	POND	100	23.782		12.0500	293.34		
POND 20 IN	POND	5	12.000		12.0500	147.67		
POND 20 OUT	POND	100	23.781		12.4000	82.61	6978.65	9.991
POND 20 OUT	POND	5	11.998		12.6000	27.26	6975.30	5.630
PWRS-4	AREA	100	5.205		12.0000	73.20		
PWRS-4	AREA	5	3.087		12.0000	44.46		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic, Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
1/2 PARCEL 28	AREA	.388		12.3000	1.90	
1/2 PARCEL 3	AREA	1.430		12.1000	14.91	
1/2 PARCEL 3 SOU	AREA	.877		12.1000	9.21	
1/2 PARCEL-33	AREA	.129		12.3000	.63	
1/2 PARCEL-4	AREA	1.270		12.1000	13.35	
1/2 PARCEL-5	AREA	1.523		12.1000	15.87	
JUNC 10	JCT	1.652		12.1500	16.30	
JUNC 20	JCT	2.922		12.1500	29.57	
JUNC 30	JCT	4.352		12.1000	44.47	
JUNC 60	JCT	15.264		12.4500	39.85	
JUNC 80	JCT	8.913		12.1000	112.40	
Outfall OUT 20	JCT	19.616		12.2000	73.28	
PARCEL 29 WEST	AREA	.926		12.3500	4.37	
PARCEL-10	AREA	1.220		12.1000	15.25	
PARCEL-23	AREA	8.035		12.1000	103.19	
PARCEL-29 EAST	AREA	.732		12.3500	3.45	
POND 20 IN	POND	12.000		12.0500	147.67	
POND 20 OUT	POND	11.998		12.6000	27.26	6975.30
PWRS-4	AREA	3.087		12.0000	44.46	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
DIR FRM 10	ADD	UN	1.220		12.1000	15.25	PARCEL-10
		DL	1.220		12.1000	15.25	
		DN	15.264		12.4500	39.85	JUNC 60
DIR FRM 28	ADD	UN	.388		12.3000	1.90	1/2 PARCEL 28
		DL	.388		12.3000	1.90	
		DN	15.264		12.4500	39.85	JUNC 60
DIR. FRM 29 W	ADD	UN	.926		12.3500	4.37	PARCEL 29 WEST
		DL	.926		12.3500	4.37	
		DN	15.264		12.4500	39.85	JUNC 60
PIPE 53	ADD	UN	.129		12.3000	.63	1/2 PARCEL-33
		DL	.129		12.3000	.63	
		DN	1.652		12.1500	16.30	JUNC 10
PIPE 54	ADD	UN	1.523		12.1000	15.87	1/2 PARCEL-5
		DL	1.523		12.1000	15.87	
		DN	1.652		12.1500	16.30	JUNC 10
PIPE 55	ADD	UN	1.652		12.1500	16.30	JUNC 10
		DL	1.652		12.1500	16.30	
		DN	2.922		12.1500	29.57	JUNC 20
PIPE 56	ADD	UN	1.270		12.1000	13.35	1/2 PARCEL-4
		DL	1.270		12.1000	13.35	
		DN	2.922		12.1500	29.57	JUNC 20

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 57	ADD	UN	2.922		12.1500	29.57	JUNC 20	
		DL	2.922		12.1500	29.57		
		DN	4.352		12.1000	44.47	JUNC 30	
PIPE 58	ADD	UN	1.430		12.1000	14.91	1/2 PARCEL 3	
		DL	1.430		12.1000	14.91		
		DN	4.352		12.1000	44.47	JUNC 30	
PIPE 59	ADD	UN	4.352		12.1000	44.47	JUNC 30	
		DL	4.352		12.1000	44.47		
		DN	19.616		12.2000	73.28	OUT 20	
PIPE 60	ADD	UN	8.035		12.1000	103.19	PARCEL-23	
		DL	8.035		12.1000	103.19		
		DN	8.913		12.1000	112.40	JUNC 80	
PIPE 61	ADD	UN	.877		12.1000	9.21	1/2 PARCEL 3	SOU
		DL	.877		12.1000	9.21		
		DN	8.913		12.1000	112.40	JUNC 80	
PIPE 62	ADD	UN	8.913		12.1000	112.40	JUNC 80	
		DL	8.913		12.1000	112.40		
		DN	12.000		12.0500	147.67	POND 20	IN
PIPE 63	PONDrt	UN	12.000		12.0500	147.67	POND 20	IN
PIPE 63			11.998		12.6000	27.26	POND 20	OUT
		DL	11.998		12.6000	27.26		
		DN	15.264		12.4500	39.85	JUNC 60	
PIPE PWRS-4	ADD	UN	3.087		12.0000	44.46	PWRS-4	
		DL	3.087		12.0000	44.46		
		DN	12.000		12.0500	147.67	POND 20	IN
REACH 5	REACH	UN	.732		12.3500	3.45	PARCEL-29 EAST	
		DL	.732		12.5000	3.44		
	(-Q)	DL	-.000		11.9500	-.01		
		DN	15.264		12.4500	39.85	JUNC 60	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
REACH 6	REACH	UN	15.264		12.4500	39.85	JUNC 60
		DL	15.264		12.6000	39.81	
		DN	19.616		12.2000	73.28	OUT 20

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 28	AREA	1.536		12.2000	13.27	
	1/2 PARCEL 3	AREA	4.138		12.1000	51.00	
	1/2 PARCEL 3 SOU	AREA	2.539		12.1000	31.46	
	1/2 PARCEL-33	AREA	.512		12.2000	4.42	
	1/2 PARCEL-4	AREA	3.675		12.1000	45.59	
	1/2 PARCEL-5	AREA	4.405		12.1000	54.29	
	JUNC 10	JCT	4.917		12.1000	57.85	
	JUNC 20	JCT	8.592		12.1000	103.44	
	JUNC 30	JCT	12.731		12.1000	154.44	
	JUNC 60	JCT	35.010		12.2500	165.50	
	JUNC 80	JCT	18.577		12.1000	233.56	
Outfall	OUT 20	JCT	47.741		12.2000	259.34	
	PARCEL 29 WEST	AREA	3.669		12.2500	30.06	
	PARCEL-10	AREA	3.123		12.1000	41.19	
	PARCEL-23	AREA	16.039		12.1000	202.09	
	PARCEL-29 EAST	AREA	2.901		12.2500	23.77	
	POND 20 IN	POND	23.782		12.0500	293.34	
	POND 20 OUT	POND	23.781		12.4000	82.61	6978.65
	PWRS-4	AREA	5.205		12.0000	73.20	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
DIR FRM 10	ADD	UN	3.123		12.1000	41.19	PARCEL-10
		DL	3.123		12.1000	41.19	
		DN	35.010		12.2500	165.50	JUNC 60
DIR FRM 28	ADD	UN	1.536		12.2000	13.27	1/2 PARCEL 28
		DL	1.536		12.2000	13.27	
		DN	35.010		12.2500	165.50	JUNC 60
DIR. FRM 29 W	ADD	UN	3.669		12.2500	30.06	PARCEL 29 WEST
		DL	3.669		12.2500	30.06	
		DN	35.010		12.2500	165.50	JUNC 60
PIPE 53	ADD	UN	.512		12.2000	4.42	1/2 PARCEL-33
		DL	.512		12.2000	4.42	
		DN	4.917		12.1000	57.85	JUNC 10
PIPE 54	ADD	UN	4.405		12.1000	54.29	1/2 PARCEL-5
		DL	4.405		12.1000	54.29	
		DN	4.917		12.1000	57.85	JUNC 10
PIPE 55	ADD	UN	4.917		12.1000	57.85	JUNC 10
		DL	4.917		12.1000	57.85	
		DN	8.592		12.1000	103.44	JUNC 20
PIPE 56	ADD	UN	3.675		12.1000	45.59	1/2 PARCEL-4
		DL	3.675		12.1000	45.59	
		DN	8.592		12.1000	103.44	JUNC 20

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
PIPE 57	ADD	UN	8.592		12.1000	103.44	JUNC 20	
		DL	8.592		12.1000	103.44		
		DN	12.731		12.1000	154.44	JUNC 30	
PIPE 58	ADD	UN	4.138		12.1000	51.00	1/2 PARCEL 3	
		DL	4.138		12.1000	51.00		
		DN	12.731		12.1000	154.44	JUNC 30	
PIPE 59	ADD	UN	12.731		12.1000	154.44	JUNC 30	
		DL	12.731		12.1000	154.44		
		DN	47.741		12.2000	259.34	OUT 20	
PIPE 60	ADD	UN	16.039		12.1000	202.09	PARCEL-23	
		DL	16.039		12.1000	202.09		
		DN	18.577		12.1000	233.56	JUNC 80	
PIPE 61	ADD	UN	2.539		12.1000	31.46	1/2 PARCEL 3	SOU
		DL	2.539		12.1000	31.46		
		DN	18.577		12.1000	233.56	JUNC 80	
PIPE 62	ADD	UN	18.577		12.1000	233.56	JUNC 80	
		DL	18.577		12.1000	233.56		
		DN	23.782		12.0500	293.34	POND 20	IN
PIPE 63	PONDrt	UN	23.782		12.0500	293.34	POND 20	IN
PIPE 63			23.781		12.4000	82.61	POND 20	OUT
		DL	23.781		12.4000	82.61		
		DN	35.010		12.2500	165.50	JUNC 60	
PIPE PWRS-4	ADD	UN	5.205		12.0000	73.20	PWRS-4	
		DL	5.205		12.0000	73.20		
		DN	23.782		12.0500	293.34	POND 20	IN
REACH 5	REACH	UN	2.901		12.2500	23.77	PARCEL-29 EAST	
		DL	2.901		12.4000	23.82		
	(-Q)	DL	-.000		.0000	.00		
		DN	35.010		12.2500	165.50	JUNC 60	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
REACH 6	REACH	UN	35.010		12.2500	165.50	JUNC 60
		DL	35.010		12.4000	165.27	
		DN	47.741		12.2000	259.34	OUT 20

File.... X:\920000\POND-PACK\
Title... Project Date: 8/19/2002
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

BLACK SQUIRREL CREEK DRAINAGE BASIN

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = Dev100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Dev 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3330 hrs

Total Tc: .3330 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3330 hrs

Total Tc: .3330 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5333 hrs

Total Tc: .5333 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3000 hrs

Total Tc: .3000 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3300 hrs

Total Tc: .3300 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5333 hrs

Total Tc: .5333 hrs

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .1667 hrs

Total Tc: .1667 hrs

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - PARCEL-29 EAST Dev 5
Outflow HYG file-ID = work_pad.hyg - REACH 5 Dev 5

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .1400 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 3 to 2 subreaches.

Time Step = .0500 hrs
Muskingum K = .1400 hrs (Each subreach K = .0700 hrs)
Muskingum X = .50000

Subreaches = 2
(Range = 3 to 2 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	11.8000 hrs	11.8000 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	25.4500 hrs	25.4500 hrs
Peak Time....	12.3500 hrs	12.5000 hrs
Peak Flow....	3.45 cfs	3.44 cfs

Inflow/Outflow Volumes

Inflow	=	.732 ac-ft
- Unrouted	=	-.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	.732 ac-ft

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 60 Dev 5
Outflow HYG file-ID = work_pad.hyg - REACH 6 Dev 5

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .1400 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 3 to 2 subreaches.

Time Step = .0500 hrs
Muskingum K = .1400 hrs (Each subreach K = .0700 hrs)
Muskingum X = .50000

Subreaches = 2
(Range = 3 to 2 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	1.8500 hrs	1.8500 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	68.5000 hrs	68.5000 hrs
Peak Time....	12.4500 hrs	12.6000 hrs
Peak Flow....	39.85 cfs	39.81 cfs

Inflow/Outflow Volumes

Inflow	=	15.264 ac-ft
- Unrouted	=	.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	15.264 ac-ft

REACH ROUTING SUMMARY
(Muskingum Reach Routing)

HYG Directory = X:\920000\POND-PACK\
Inflow HYG file-ID = work_pad.hyg - JUNC 60 Dev100
Outflow HYG file-ID = work_pad.hyg - REACH 6 Dev100

Base Flow = .00 cfs
No Infiltration
WARNING: Muskingum K and # subreaches outside of acceptable range.
For given K = .1400 hrs, X = .50000, and Step= .0500 hrs...
subreaches should be within range of 3 to 2 subreaches.

Time Step = .0500 hrs
Muskingum K = .1400 hrs (Each subreach K = .0700 hrs)
Muskingum X = .50000

Subreaches = 2
(Range = 3 to 2 subreaches for given K, X, and time step.)

	Inflow Hydrograph	Outflow Hydrograph
Time Start...	1.2000 hrs	1.2000 hrs
Time Step....	.0500 hrs	.0500 hrs
Time End.....	69.7000 hrs	69.7000 hrs
Peak Time....	12.2500 hrs	12.4000 hrs
Peak Flow....	165.50 cfs	165.27 cfs

Inflow/Outflow Volumes

Inflow	=	35.010 ac-ft
- Unrouted	=	.000 ac-ft
+ Base Flow	=	.000 ac-ft
- Infiltration	=	.000 ac-ft
Outflow	=	35.010 ac-ft

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
6970.00	-----	.9260	.0000	.000	.000
6978.00	-----	1.3590	3.4068	9.085	9.085
6980.00	-----	1.5220	4.3192	2.879	11.964

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 6970.00 ft
Increment = .50 ft
Max. Elev.= 6980.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	CV	--->	TW	6975.000	6980.000
Culvert-Circular	CV	--->	TW	6970.000	6980.000

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID	=	CV	
Structure Type	=	Stand Pipe	
# of Openings	=	1	
Invert Elev.	=	6975.00	ft
Diameter	=	3.0000	ft
Orifice Area	=	7.0686	sq.ft
Orifice Coeff.	=	.500	
Weir Length	=	9.42	ft
Weir Coeff.	=	3.000	
K, Submerged	=	.000	
K, Reverse	=	1.000	
Kb,Barrel	=	.000000	(per ft of full flow)
Barrel Length	=	.00	ft
Mannings n	=	.0000	

File.... X:\920000\POND-PACK\BLACK-DEV.PPW

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels	=	1
Barrel Diameter	=	1.5000 ft
Upstream Invert	=	6970.00 ft
Dnstream Invert	=	6965.00 ft
Horiz. Length	=	20.00 ft
Barrel Length	=	20.62 ft
Barrel Slope	=	.25000 ft/ft

OUTLET CONTROL DATA...

Mannings n	=	.0130	
Ke	=	.5000	(forward entrance loss)
Kb	=	.018213	(per ft of full flow)
Kr	=	.5000	(reverse entrance loss)
HW Convergence	=	.001	+/- ft

INLET CONTROL DATA...

Equation form	=	1
Inlet Control K	=	.0078
Inlet Control M	=	2.0000
Inlet Control c	=	.02920
Inlet Control Y	=	.7400
T1 ratio (HW/D)	=	1.123
T2 ratio (HW/D)	=	1.195
Slope Factor	=	-.050

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 6971.69 ft ---> Flow = 7.58 cfs
At T2 Elev = 6971.79 ft ---> Flow = 8.66 cfs

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

Maximum Iterations	=	30
Min. TW tolerance	=	.01 ft
Max. TW tolerance	=	.01 ft
Min. HW tolerance	=	.01 ft
Max. HW tolerance	=	.01 ft
Min. Q tolerance	=	.10 cfs
Max. Q tolerance	=	.10 cfs

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Job File: X:\920000\POND-PACK\MIDDLE-DEV.PPW
Rain Dir: X:\920000\POND-PACK\

==========
JOB TITLE
==========

Project Date: 8/19/2002
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

MIDDLE TRIBUTARY DRAINAGE BASIN

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MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
100Y24	4.4000	Synthetic Curve	TypeII 24hr
5Y24H	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
1/2 PARCEL-1	AREA	100	3.878		12.1000	48.52		
1/2 PARCEL-1	AREA	5	1.340		12.1000	14.24		
1/2 PARCEL-33	AREA	100	.341		12.2000	2.95		
1/2 PARCEL-33	AREA	5	.086		12.3000	.42		
1/2 PARCEL-4	AREA	100	5.679		12.1000	70.38		
1/2 PARCEL-4	AREA	5	1.962		12.1000	20.60		
1/2 PARCEL-5	AREA	100	5.340		12.1000	65.81		
1/2 PARCEL-5	AREA	5	1.845		12.1000	19.24		
JUNC 10	JCT	100	5.681		12.1000	68.18		
JUNC 10	JCT	5	1.932		12.1500	19.51		
JUNC 20	JCT	100	15.238		12.1000	187.08		
JUNC 20	JCT	5	5.234		12.1000	54.31		
*OUT 20	JCT	100	15.238		12.1000	187.08		
*OUT 20	JCT	5	5.234		12.1000	54.31		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic, Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
1/2 PARCEL-1	AREA	1.340		12.1000	14.24	
1/2 PARCEL-33	AREA	.086		12.3000	.42	
1/2 PARCEL-4	AREA	1.962		12.1000	20.60	
1/2 PARCEL-5	AREA	1.845		12.1000	19.24	
JUNC 10	JCT	1.932		12.1500	19.51	
JUNC 20	JCT	5.234		12.1000	54.31	
Outfall OUT 20	JCT	5.234		12.1000	54.31	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
PIPE 47	ADD	UN	.086		12.3000	.42	1/2 PARCEL-33
		DL	.086		12.3000	.42	
		DN	1.932		12.1500	19.51	JUNC 10
PIPE 48	ADD	UN	1.845		12.1000	19.24	1/2 PARCEL-5
		DL	1.845		12.1000	19.24	
		DN	1.932		12.1500	19.51	JUNC 10
PIPE 50	ADD	UN	1.962		12.1000	20.60	1/2 PARCEL-4
		DL	1.962		12.1000	20.60	
		DN	5.234		12.1000	54.31	JUNC 20
PIPE 51	ADD	UN	1.340		12.1000	14.24	1/2 PARCEL-1
		DL	1.340		12.1000	14.24	
		DN	5.234		12.1000	54.31	JUNC 20
PIPE 52	ADD	UN	5.234		12.1000	54.31	JUNC 20
		DL	5.234		12.1000	54.31	
		DN	5.234		12.1000	54.31	OUT 20
PIPE49	ADD	UN	1.932		12.1500	19.51	JUNC 10
		DL	1.932		12.1500	19.51	
		DN	5.234		12.1000	54.31	JUNC 20

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
1/2 PARCEL-1	AREA	3.878		12.1000	48.52	
1/2 PARCEL-33	AREA	.341		12.2000	2.95	
1/2 PARCEL-4	AREA	5.679		12.1000	70.38	
1/2 PARCEL-5	AREA	5.340		12.1000	65.81	
JUNC 10	JCT	5.681		12.1000	68.18	
JUNC 20	JCT	15.238		12.1000	187.08	
Outfall OUT 20	JCT	15.238		12.1000	187.08	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
PIPE 47	ADD	UN	.341		12.2000	2.95	1/2 PARCEL-33
		DL	.341		12.2000	2.95	
		DN	5.681		12.1000	68.18	JUNC 10
PIPE 48	ADD	UN	5.340		12.1000	65.81	1/2 PARCEL-5
		DL	5.340		12.1000	65.81	
		DN	5.681		12.1000	68.18	JUNC 10
PIPE 50	ADD	UN	5.679		12.1000	70.38	1/2 PARCEL-4
		DL	5.679		12.1000	70.38	
		DN	15.238		12.1000	187.08	JUNC 20
PIPE 51	ADD	UN	3.878		12.1000	48.52	1/2 PARCEL-1
		DL	3.878		12.1000	48.52	
		DN	15.238		12.1000	187.08	JUNC 20
PIPE 52	ADD	UN	15.238		12.1000	187.08	JUNC 20
		DL	15.238		12.1000	187.08	
		DN	15.238		12.1000	187.08	OUT 20
PIPE49	ADD	UN	5.681		12.1000	68.18	JUNC 10
		DL	5.681		12.1000	68.18	
		DN	15.238		12.1000	187.08	JUNC 20

File.... X:\920000\POND-PACK\
Title... Project Date: 8/19/2002
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

MIDDLE TRIBUTARY DRAINAGE BASIN

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

File.... X:\920000\POND-PACK\MIDDLE-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3300 hrs

Total Tc: .3300 hrs

File.... X:\920000\POND-PACK\MIDDLE-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

File.... X:\920000\POND-PACK\MIDDLE-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3333 hrs

Total Tc: .3333 hrs

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .3330 hrs

Total Tc: .3330 hrs

Index of Starting Page Numbers for ID Names

----- 1 -----
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1/2 PARCEL-33... 4.03
1/2 PARCEL-4... 4.05
1/2 PARCEL-5... 4.07

----- C -----
COLO SPRGS... 3.01

----- W -----
Watershed... 1.01, 2.01, 2.02, 2.03,
2.04

Job File: X:\920000\POND-PACK\ELKHORN-DEV.PPW
Rain Dir: X:\920000\POND-PACK\

==========
JOB TITLE
==========

Project Date: 8/21/2002
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

ELKHORN DRAINAGE BASIN

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Watershed..... 100Y24
Executive Summary (Nodes) 2.02
Executive Summary (Links) 2.03

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COLO SPRGS..... Design Storms 3.01

********** TC CALCULATIONS **********

1/2 PARCEL 28... Tc Calcs 4.01

PARCEL 13..... Tc Calcs 4.03

PARCEL 17..... Tc Calcs 4.05

MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
100Y24	4.4000	Synthetic Curve	TypeII 24hr
5Y24H	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
1/2 PARCEL 28	AREA	100	.597		12.2000	5.16		
1/2 PARCEL 28	AREA	5	.151		12.3000	.74		
*OUT 20	JCT	100	17.326		12.0000	248.71		
*OUT 20	JCT	5	8.921		12.0000	132.49		
PARCEL 13	AREA	100	3.288		12.0500	47.28		
PARCEL 13	AREA	5	1.563		12.0500	22.72		
PARCEL 17	AREA	100	13.441		12.0000	200.35		
PARCEL 17	AREA	5	7.207		12.0000	110.70		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 28	AREA	.151		12.3000	.74	
Outfall	OUT 20	JCT	8.921		12.0000	132.49	
	PARCEL 13	AREA	1.563		12.0500	22.72	
	PARCEL 17	AREA	7.207		12.0000	110.70	

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 28	AREA	.597		12.2000	5.16	
Outfall	OUT 20	JCT	17.326		12.0000	248.71	
	PARCEL 13	AREA	3.288		12.0500	47.28	
	PARCEL 17	AREA	13.441		12.0000	200.35	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	13.441		12.0000	200.35	PARCEL 17
		DL	13.441		12.0000	200.35	
		DN	17.326		12.0000	248.71	OUT 20
ADDLINK 50	ADD	UN	.597		12.2000	5.16	1/2 PARCEL 28
		DL	.597		12.2000	5.16	
		DN	17.326		12.0000	248.71	OUT 20
ADDLINK 60	ADD	UN	3.288		12.0500	47.28	PARCEL 13
		DL	3.288		12.0500	47.28	
		DN	17.326		12.0000	248.71	OUT 20

File.... X:\920000\POND-PACK\
Title... Project Date: 8/21/2002
Project Engineer: David Gibson
Project Title: FLYING HORSE
Project Comments:
FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DEVELOPED ANALYSIS

ELKHORN DRAINAGE BASIN

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

File.... X:\920000\POND-PACK\ELKHORN-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .5000 hrs

Total Tc: .5000 hrs

File.... X:\920000\POND-PACK\ELKHORN-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2500 hrs

Total Tc: .2500 hrs

File.... X:\920000\POND-PACK\ELKHORN-DEV.PPW

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: User Defined

Segment #1 Time: .2000 hrs

Total Tc: .2000 hrs

Index of Starting Page Numbers for ID Names

----- 1 -----
1/2 PARCEL 28... 4.01

----- C -----
COLO SPRGS... 3.01

----- P -----
PARCEL 13... 4.03
PARCEL 17... 4.05

----- W -----
Watershed... 1.01, 2.01, 2.02, 2.03

Job File: X:\920000\POND-PACK\MONUMENT-1.PPW
Rain Dir: X:\920000\POND-PACK\

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JOB TITLE
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FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

MONUMENT BRANCH DRAINAGE BASIN ~~SOUTH~~ NORTH

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Network Calcs Sequence 2.05

Watershed..... Pre100
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********** DESIGN STORMS SUMMARY **********

COLO SPRGS..... Design Storms 3.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Pre100	4.4000	Synthetic Curve	TypeII 24hr
Pre 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
DP-1	JCT	100	19.226		12.2000	172.81		
DP-1	JCT	5	5.469		12.2500	34.04		
DP-3	JCT	100	16.127		12.2500	132.14		
DP-3	JCT	5	4.071		12.3500	19.20		
DP-4	JCT	100	40.728		12.3500	345.36		
DP-4	JCT	5	10.897		12.4000	59.19		
DP-5	JCT	100	22.826		12.1500	224.53		
DP-5	JCT	5	7.010		12.2000	52.84		
DP-6	JCT	100	75.152		12.3000	608.50		
DP-6	JCT	5	21.696		12.3500	123.71		
DP-7	JCT	100	89.486		12.5000	722.03		
DP-7	JCT	5	25.315		12.5000	140.40		
EX-1	AREA	100	10.922		12.2500	89.49		
EX-1	AREA	5	2.757		12.3500	13.00		
EX-2	AREA	100	5.802		12.2500	47.54		
EX-2	AREA	5	1.465		12.3500	6.91		
EX-3	AREA	100	5.973		12.2500	48.94		
EX-3	AREA	5	1.508		12.3500	7.11		
EX-4	AREA	100	14.335		12.2500	117.46		
EX-4	AREA	5	3.619		12.3500	17.06		
EX-5	AREA	100	10.325		12.2500	84.60		
EX-5	AREA	5	2.607		12.3500	12.29		
EX-6	AREA	100	5.376		12.2500	44.05		
EX-6	AREA	5	1.357		12.3500	6.40		
JUNC 80	JCT	100	24.602		12.2500	215.57		
JUNC 80	JCT	5	6.826		12.3000	40.03		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
OS-1	AREA	100	8.304		12.1500	88.97		
OS-1	AREA	5	2.711		12.2000	23.16		
OS-2	AREA	100	16.853		12.1500	180.55		
OS-2	AREA	5	5.502		12.2000	47.00		
OS-3	AREA	100	11.598		12.1500	125.07		
OS-3	AREA	5	3.789		12.2000	32.73		
*OUT 10	JCT	100	89.486		12.5000	722.03		
*OUT 10	JCT	5	25.315		12.5000	140.40		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
DP-1	JCT	5.469		12.2500	34.04	
DP-3	JCT	4.071		12.3500	19.20	
DP-4	JCT	10.897		12.4000	59.19	
DP-5	JCT	7.010		12.2000	52.84	
DP-6	JCT	21.696		12.3500	123.71	
DP-7	JCT	25.315		12.5000	140.40	
EX-1	AREA	2.757		12.3500	13.00	
EX-2	AREA	1.465		12.3500	6.91	
EX-3	AREA	1.508		12.3500	7.11	
EX-4	AREA	3.619		12.3500	17.06	
EX-5	AREA	2.607		12.3500	12.29	
EX-6	AREA	1.357		12.3500	6.40	
JUNC 80	JCT	6.826		12.3000	40.03	
OS-1	AREA	2.711		12.2000	23.16	
OS-2	AREA	5.502		12.2000	47.00	
OS-3	AREA	3.789		12.2000	32.73	
Outfall OUT 10	JCT	25.315		12.5000	140.40	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	2.757		12.3500	13.00	EX-1
		DL	2.757		12.3500	13.00	
		DN	5.469		12.2500	34.04	DP-1
ADDLINK 120	ADD	UN	25.315		12.5000	140.40	DP-7
		DL	25.315		12.5000	140.40	
		DN	25.315		12.5000	140.40	OUT 10
ADDLINK 130	ADD	UN	2.711		12.2000	23.16	OS-1
		DL	2.711		12.2000	23.16	
		DN	5.469		12.2500	34.04	DP-1
ADDLINK 20	ADD	UN	3.789		12.2000	32.73	OS-3
		DL	3.789		12.2000	32.73	
		DN	21.696		12.3500	123.71	DP-6
ADDLINK 30	ADD	UN	1.465		12.3500	6.91	EX-2
		DL	1.465		12.3500	6.91	
		DN	4.071		12.3500	19.20	DP-3
ADDLINK 40	ADD	UN	2.607		12.3500	12.29	EX-5
		DL	2.607		12.3500	12.29	
		DN	4.071		12.3500	19.20	DP-3
ADDLINK 80	ADD	UN	5.502		12.2000	47.00	OS-2
		DL	5.502		12.2000	47.00	
		DN	7.010		12.2000	52.84	DP-5

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 90	ADD	UN	1.508		12.3500	7.11	EX-3
		DL	1.508		12.3500	7.11	
		DN	7.010		12.2000	52.84	DP-5
REACH-1	REACH	UN	1.357		12.3500	6.40	EX-6
		DL	1.357		12.4000	6.40	
	(-Q)	DL	-.000		.0000	.00	
		DN	6.826		12.3000	40.03	JUNC 80
REACH-2	REACH	UN	5.469		12.2500	34.04	DP-1
		DL	5.469		12.3000	34.09	
	(-Q)	DL	-.000		.0000	.00	
		DN	6.826		12.3000	40.03	JUNC 80
REACH-3	REACH	UN	6.826		12.3000	40.03	JUNC 80
		DL	6.826		12.4000	39.99	
	(-Q)	DL	-.000		.0000	.00	
		DN	10.897		12.4000	59.19	DP-4
REACH-4	REACH	UN	4.071		12.3500	19.20	DP-3
		DL	4.071		12.4000	19.20	
	(-Q)	DL	-.000		11.8500	-.00	
		DN	10.897		12.4000	59.19	DP-4
REACH-5	REACH	UN	10.897		12.4000	59.19	DP-4
		DL	10.897		12.4500	59.07	
	(-Q)	DL	-.000		11.9000	-.01	
		DN	21.696		12.3500	123.71	DP-6
REACH-6	REACH	UN	7.010		12.2000	52.84	DP-5
		DL	7.010		12.2500	52.67	
	(-Q)	DL	-.000		11.7500	-.00	
		DN	21.696		12.3500	123.71	DP-6
REACH-7	REACH	UN	21.696		12.3500	123.71	DP-6
		DL	21.696		12.5000	123.36	
	(-Q)	DL	-.000		11.8500	-.01	
		DN	25.315		12.5000	140.40	DP-7

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
REACH-8	REACH	UN	3.619		12.3500	17.06	EX-4
		DL	3.619		12.5000	17.05	
	(-Q)	DL	-.000		11.9500	-.01	
		DN	25.315		12.5000	140.40	DP-7

NETWORK RUNOFF NODE SEQUENCE

Runoff Data	Apply to Node	Receiving Link
SCS UH OS-1	Subarea OS-1	Add Hyd OS-1
SCS UH EX-1	Subarea EX-1	Add Hyd EX-1
SCS UH EX-2	Subarea EX-2	Add Hyd EX-2
SCS UH EX-5	Subarea EX-5	Add Hyd EX-5
SCS UH OS-2	Subarea OS-2	Add Hyd OS-2
SCS UH EX-3	Subarea EX-3	Add Hyd EX-3
SCS UH OS-3	Subarea OS-3	Add Hyd OS-3
SCS UH EX-4	Subarea EX-4	Reach EX-4
SCS UH EX-6	Subarea EX-6	Reach EX-6

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node		DNstream Node	
Add Hyd ADDLINK 10	Subarea	EX-1	Jct	DP-1
Add Hyd ADDLINK 130	Subarea	OS-1	Jct	DP-1
Add Hyd ADDLINK 40	Subarea	EX-5	Jct	DP-3
Add Hyd ADDLINK 30	Subarea	EX-2	Jct	DP-3
Reach REACH-1	Subarea	EX-6	Jct	JUNC 80
Reach REACH-2	Jct	DP-1	Jct	JUNC 80
Reach REACH-3	Jct	JUNC 80	Jct	DP-4
Reach REACH-4	Jct	DP-3	Jct	DP-4
Add Hyd ADDLINK 90	Subarea	EX-3	Jct	DP-5
Add Hyd ADDLINK 80	Subarea	OS-2	Jct	DP-5
Reach REACH-6	Jct	DP-5	Jct	DP-6
Add Hyd ADDLINK 20	Subarea	OS-3	Jct	DP-6
Reach REACH-5	Jct	DP-4	Jct	DP-6
Reach REACH-8	Subarea	EX-4	Jct	DP-7
Reach REACH-7	Jct	DP-6	Jct	DP-7
Add Hyd ADDLINK 120	Jct	DP-7	Jct	OUT 10

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
DP-1	JCT	19.226		12.2000	172.81	
DP-3	JCT	16.127		12.2500	132.14	
DP-4	JCT	40.728		12.3500	345.36	
DP-5	JCT	22.826		12.1500	224.53	
DP-6	JCT	75.152		12.3000	608.50	
DP-7	JCT	89.486		12.5000	722.03	
EX-1	AREA	10.922		12.2500	89.49	
EX-2	AREA	5.802		12.2500	47.54	
EX-3	AREA	5.973		12.2500	48.94	
EX-4	AREA	14.335		12.2500	117.46	
EX-5	AREA	10.325		12.2500	84.60	
EX-6	AREA	5.376		12.2500	44.05	
JUNC 80	JCT	24.602		12.2500	215.57	
OS-1	AREA	8.304		12.1500	88.97	
OS-2	AREA	16.853		12.1500	180.55	
OS-3	AREA	11.598		12.1500	125.07	
Outfall OUT 10	JCT	89.486		12.5000	722.03	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	10.922		12.2500	89.49	EX-1
		DL	10.922		12.2500	89.49	
		DN	19.226		12.2000	172.81	DP-1
ADDLINK 120	ADD	UN	89.486		12.5000	722.03	DP-7
		DL	89.486		12.5000	722.03	
		DN	89.486		12.5000	722.03	OUT 10
ADDLINK 130	ADD	UN	8.304		12.1500	88.97	OS-1
		DL	8.304		12.1500	88.97	
		DN	19.226		12.2000	172.81	DP-1
ADDLINK 20	ADD	UN	11.598		12.1500	125.07	OS-3
		DL	11.598		12.1500	125.07	
		DN	75.152		12.3000	608.50	DP-6
ADDLINK 30	ADD	UN	5.802		12.2500	47.54	EX-2
		DL	5.802		12.2500	47.54	
		DN	16.127		12.2500	132.14	DP-3
ADDLINK 40	ADD	UN	10.325		12.2500	84.60	EX-5
		DL	10.325		12.2500	84.60	
		DN	16.127		12.2500	132.14	DP-3
ADDLINK 80	ADD	UN	16.853		12.1500	180.55	OS-2
		DL	16.853		12.1500	180.55	
		DN	22.826		12.1500	224.53	DP-5

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 90	ADD	UN	5.973		12.2500	48.94	EX-3
		DL	5.973		12.2500	48.94	
		DN	22.826		12.1500	224.53	DP-5
REACH-1	REACH	UN	5.376		12.2500	44.05	EX-6
		DL	5.376		12.3000	44.04	
	(-Q)	DL	-.000		.0000	.00	
		DN	24.602		12.2500	215.57	JUNC 80
REACH-2	REACH	UN	19.226		12.2000	172.81	DP-1
		DL	19.226		12.2500	172.83	
		DN	24.602		12.2500	215.57	JUNC 80
REACH-3	REACH	UN	24.602		12.2500	215.57	JUNC 80
		DL	24.602		12.3500	215.13	
		DN	40.728		12.3500	345.36	DP-4
REACH-4	REACH	UN	16.127		12.2500	132.14	DP-3
		DL	16.127		12.3000	132.08	
	(-Q)	DL	-.000		.0000	.00	
		DN	40.728		12.3500	345.36	DP-4
REACH-5	REACH	UN	40.728		12.3500	345.36	DP-4
		DL	40.728		12.4000	345.22	
		DN	75.152		12.3000	608.50	DP-6
REACH-6	REACH	UN	22.826		12.1500	224.53	DP-5
		DL	22.826		12.2500	223.68	
		DN	75.152		12.3000	608.50	DP-6
REACH-7	REACH	UN	75.152		12.3000	608.50	DP-6
		DL	75.151		12.5000	610.42	
	(-Q)	DL	-.000		.0000	.00	
		DN	89.486		12.5000	722.03	DP-7
REACH-8	REACH	UN	14.335		12.2500	117.46	EX-4
		DL	14.335		12.4500	117.28	
	(-Q)	DL	-.000		.0000	.00	
		DN	89.486		12.5000	722.03	DP-7

MONUMENT BRANCH DRAINAGE BASIN SOUTH

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Index of Starting Page Numbers for ID Names

----- C -----
COLO SPRGS... 3.01

----- W -----
Watershed... 1.01, 2.01, 2.02, 2.05,
2.07, 2.08

==========
JOB TITLE
==========

FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

HISTORIC ANALYSIS

MONUMENT BRANCH DRAINAGE BASIN SOUTH

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Executive Summary (Links) 2.07

********** DESIGN STORMS SUMMARY **********

COLO SPRGS..... Design Storms 3.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Pre100	4.4000	Synthetic Curve	TypeII 24hr
Pre 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
EX-10	AREA	100	8.533		12.2500	69.92		
EX-10	AREA	5	2.154		12.3500	10.16		
EX-11	AREA	100	12.884		12.2500	105.57		
EX-11	AREA	5	3.253		12.3500	15.33		
EX-7	AREA	100	2.219		12.2500	18.18		
EX-7	AREA	5	.560		12.3500	2.64		
EX-8	AREA	100	6.485		12.2500	53.14		
EX-8	AREA	5	1.637		12.3500	7.72		
EX-9	AREA	100	5.120		12.2500	41.95		
EX-9	AREA	5	1.293		12.3500	6.09		
JUNC 10	JCT	100	26.536		12.4500	213.66		
JUNC 10	JCT	5	6.700		12.5500	31.13		
JUNC 20	JCT	100	33.021		12.5000	252.71		
JUNC 20	JCT	5	8.337		12.6000	37.37		
JUNC 80	JCT	100	13.652		12.3000	108.59		
JUNC 80	JCT	5	3.447		12.4000	16.01		
*OUT 20	JCT	100	35.240		12.5000	264.85		
*OUT 20	JCT	5	8.897		12.5500	39.43		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
EX-10	AREA	2.154		12.3500	10.16	
EX-11	AREA	3.253		12.3500	15.33	
EX-7	AREA	.560		12.3500	2.64	
EX-8	AREA	1.637		12.3500	7.72	
EX-9	AREA	1.293		12.3500	6.09	
JUNC 10	JCT	6.700		12.5500	31.13	
JUNC 20	JCT	8.337		12.6000	37.37	
JUNC 80	JCT	3.447		12.4000	16.01	
Outfall OUT 20	JCT	8.897		12.5500	39.43	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	.560		12.3500	2.64	EX-7
		DL	.560		12.3500	2.64	
		DN	8.897		12.5500	39.43	OUT 20
ADDLINK 20	ADD	UN	1.293		12.3500	6.09	EX-9
		DL	1.293		12.3500	6.09	
		DN	3.447		12.4000	16.01	JUNC 80
ADDLINK 80	ADD	UN	8.337		12.6000	37.37	JUNC 20
		DL	8.337		12.6000	37.37	
		DN	8.897		12.5500	39.43	OUT 20
REACH-10	REACH	UN	3.447		12.4000	16.01	JUNC 80
		DL	3.447		12.5500	15.97	
	(-Q)	DL	-.000		11.9000	-.01	
		DN	6.700		12.5500	31.13	JUNC 10
REACH-11	REACH	UN	3.253		12.3500	15.33	EX-11
		DL	3.253		12.5000	15.34	
	(-Q)	DL	-.000		11.9500	-.01	
		DN	6.700		12.5500	31.13	JUNC 10
REACH-12	REACH	UN	1.637		12.3500	7.72	EX-8
		DL	1.637		12.3500	7.72	
		DN	8.337		12.6000	37.37	JUNC 20
REACH-13	REACH	UN	6.700		12.5500	31.13	JUNC 10
		DL	6.700		12.6000	31.19	
	(-Q)	DL	-.000		12.0000	-.01	
		DN	8.337		12.6000	37.37	JUNC 20

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
REACH-9	REACH	UN	2.154		12.3500	10.16	EX-10
		DL	2.154		12.4500	10.16	
	(-Q)	DL	-.000'		11.9000	-.00	
		DN	3.447		12.4000	16.01	JUNC 80

NETWORK RUNOFF NODE SEQUENCE

Runoff Data	Apply to Node	Receiving Link
SCS UH EX-7	Subarea EX-7	Add Hyd EX-7
SCS UH EX-9	Subarea EX-9	Add Hyd EX-9
SCS UH EX-10	Subarea EX-10	Reach EX-10
SCS UH EX-11	Subarea EX-11	Reach EX-11
SCS UH EX-8	Subarea EX-8	Reach EX-8

NETWORK ROUTING SEQUENCE

Link Operation		UPstream Node		DNstream Node	
Reach	REACH-9	Subarea	EX-10	Jct	JUNC 80
Add Hyd	ADDLINK 20	Subarea	EX-9	Jct	JUNC 80
Reach	REACH-11	Subarea	EX-11	Jct	JUNC 10
Reach	REACH-10	Jct	JUNC 80	Jct	JUNC 10
Reach	REACH-13	Jct	JUNC 10	Jct	JUNC 20
Reach	REACH-12	Subarea	EX-8	Jct	JUNC 20
Add Hyd	ADDLINK 10	Subarea	EX-7	Jct	OUT 20
Add Hyd	ADDLINK 80	Jct	JUNC 20	Jct	OUT 20

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
EX-10	AREA	8.533		12.2500	69.92	
EX-11	AREA	12.884		12.2500	105.57	
EX-7	AREA	2.219		12.2500	18.18	
EX-8	AREA	6.485		12.2500	53.14	
EX-9	AREA	5.120		12.2500	41.95	
JUNC 10	JCT	26.536		12.4500	213.66	
JUNC 20	JCT	33.021		12.5000	252.71	
JUNC 80	JCT	13.652		12.3000	108.59	
Outfall OUT 20	JCT	35.240		12.5000	264.85	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	2.219		12.2500	18.18	EX-7
		DL	2.219		12.2500	18.18	
		DN	35.240		12.5000	264.85	OUT 20
ADDLINK 20	ADD	UN	5.120		12.2500	41.95	EX-9
		DL	5.120		12.2500	41.95	
		DN	13.652		12.3000	108.59	JUNC 80
ADDLINK 80	ADD	UN	33.021		12.5000	252.71	JUNC 20
		DL	33.021		12.5000	252.71	
		DN	35.240		12.5000	264.85	OUT 20
REACH-10	REACH	UN	13.652		12.3000	108.59	JUNC 80
		DL	13.652		12.4500	108.72	
	(-Q)	DL	-.000		.0000	.00	
		DN	26.536		12.4500	213.66	JUNC 10
REACH-11	REACH	UN	12.884		12.2500	105.57	EX-11
		DL	12.884		12.4000	105.10	
	(-Q)	DL	-.000		.0000	.00	
		DN	26.536		12.4500	213.66	JUNC 10
REACH-12	REACH	UN	6.485		12.2500	53.14	EX-8
		DL	6.485		12.3000	53.15	
		DN	33.021		12.5000	252.71	JUNC 20
REACH-13	REACH	UN	26.536		12.4500	213.66	JUNC 10
		DL	26.536		12.5000	213.72	
	(-Q)	DL	-.000		11.8000	-.01	
		DN	33.021		12.5000	252.71	JUNC 20

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
REACH-9	REACH	UN	8.533		12.2500	69.92	EX-10
		DL	8.533		12.3500	69.83	
	(-Q)	DL	-.000		.0000	.00	
		DN	13.652		12.3000	108.59	JUNC 80

HISTORIC ANALYSIS

MONUMENT BRANCH DRAINAGE BASIN SOUTH

DESIGN STORMS SUMMARY

Design Storm File,ID = ' COLO SPRGS

Storm Tag Name = Prel00

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Index of Starting Page Numbers for ID Names

----- C -----
COLO SPRGS... 3.01

----- W -----
Watershed... 1.01, 2.01, 2.02, 2.04,
2.06, 2.07

Job File: X:\920000\POND-PACK\MIDDLE.PPW
Rain Dir: X:\920000\POND-PACK\

==========
JOB TITLE
==========

FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

HISTORIC ANALYSIS

MIDDLE TRIBUTARY DRAINAGE BASIN

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Watershed..... 100Y24
Executive Summary (Nodes) 1.05
Executive Summary (Links) 1.06

********** DESIGN STORMS SUMMARY **********

COLO SPRGS..... Design Storms 2.01

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
EX-12	AREA	4.984		12.2500	37.39	
Outfall OUT 20	JCT	4.984		12.2500	37.39	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 30	ADD	UN	4.984		12.2500	37.39	EX-12
		DL	4.984		12.2500	37.39	
		DN	4.984		12.2500	37.39	OUT 20

NETWORK RUNOFF NODE SEQUENCE

Runoff Data	Apply to Node	Receiving Link
SCS UH EX-12	Subarea EX-12	Add Hyd EX-12

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd ADDLINK 30	Subarea EX-12	Jct OUT 20

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
EX-12	AREA	14.824		12.2500	135.80	
Outfall OUT 20	JCT	14.824		12.2500	135.80	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 30	ADD	UN	14.824		12.2500	135.80	EX-12
		DL	14.824		12.2500	135.80	
		DN	14.824		12.2500	135.80	OUT 20

Type.... Design Storms
Name.... COLO SPRGS

File.... X:\920000\POND-PACK\
Title... FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

HISTORIC ANALYSIS

MIDDLE TRIBUTARY DRAINAGE BASIN

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Index of Starting Page Numbers for ID Names

----- C -----
COLO SPRGS... 2.01, 1.01, 1.02,
1.03, 1.05, 1.06

Job File: X:\920000\POND-PACK\BLACK.PPW
Rain Dir: X:\920000\POND-PACK\

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JOB TITLE
==========

FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

HISTORIC ANALYSIS

BLACK SQUIRREL CREEK DRAINAGE BASIN

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Network Calcs Sequence 2.03

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Executive Summary (Links) 2.06

********** DESIGN STORMS SUMMARY **********

COLO SPRGS..... Design Storms 3.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Pre100	4.4000	Synthetic Curve	TypeII 24hr
Pre 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
EX-13	AREA	100	9.812		12.2500	80.40		
EX-13	AREA	5	2.477		12.3500	11.68		
EX-14	AREA	100	17.833		12.2500	146.13		
EX-14	AREA	5	4.502		12.3500	21.22		
*OUT 20	JCT	100	27.645		12.5000	215.81		
*OUT 20	JCT	5	6.980		12.6000	31.79		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
EX-13	AREA	2.477		12.3500	11.68	
EX-14	AREA	4.502		12.3500	21.22	
Outfall OUT 20	JCT	6.980		12.6000	31.79	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
REACH 15	REACH	UN	2.477		12.3500	11.68	EX-13
		DL	2.477		12.4500	11.63	
	(-Q)	DL	-.000		11.9000	-.01	
		DN	6.980		12.6000	31.79	OUT 20
REACH 16	REACH	UN	4.502		12.3500	21.22	EX-14
		DL	4.502		12.6000	21.15	
	(-Q)	DL	-.000		12.0500	-.02	
		DN	6.980		12.6000	31.79	OUT 20

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	EX-13	Subarea	EX-13	Reach	EX-13
SCS UH	EX-14	Subarea	EX-14	Reach	EX-14

NETWORK ROUTING SEQUENCE

Link	Operation	UPstream Node	DNstream Node	
Reach	REACH 15	Subarea EX-13	Jct	OUT 20
Reach	REACH 16	Subarea EX-14	Jct	OUT 20

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
EX-13	AREA	9.812		12.2500	80.40	
EX-14	AREA	17.833		12.2500	146.13	
Outfall OUT 20	JCT	27.645		12.5000	215.81	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
REACH 15	REACH	UN	9.812		12.2500	80.40	EX-13
		DL	9.812		12.4000	80.46	
	(-Q)	DL	-.000		.0000	.00	
		DN	27.645		12.5000	215.81	OUT 20
REACH 16	REACH	UN	17.833		12.2500	146.13	EX-14
		DL	17.833		12.5500	146.26	
	(-Q)	DL	-.000		.0000	.00	
		DN	27.645		12.5000	215.81	OUT 20

File.... X:\920000\POND-PACK\
Title... FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

HISTORIC ANALYSIS

BLACK SQUIRREL CREEK DRAINAGE BASIN

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Index of Starting Page Numbers for ID Names

----- C -----
COLO SPRGS... 3.01

----- W -----
Watershed... 1.01, 2.01, 2.02, 2.03,
2.05, 2.06

Job File: X:\920000\POND-PACK\ELKHORN.PPW
Rain Dir: X:\920000\POND-PACK\

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JOB TITLE
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FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

HISTORIC ANALYSIS

ELKHORN DRAINAGE BASIN

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Executive Summary (Nodes) 2.05
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********** DESIGN STORMS SUMMARY **********

COLO SPRGS..... Design Storms 3.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
100Y24	4.4000	Synthetic Curve	TypeII 24hr
5Y24H	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
1/2 PARCEL 28	AREA	100	.597		12.2500	4.89		
1/2 PARCEL 28	AREA	5	.151		12.3500	.71		
*OUT 20	JCT	100	5.717		12.2500	46.84		
*OUT 20	JCT	5	1.443		12.3500	6.81		
PARCEL 13	AREA	100	1.195		12.2500	9.79		
PARCEL 13	AREA	5	.302		12.3500	1.42		
PARCEL 17	AREA	100	3.925		12.2500	32.16		
PARCEL 17	AREA	5	.991		12.3500	4.67		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 28	AREA	.151		12.3500	.71	
Outfall	OUT 20	JCT	1.443		12.3500	6.81	
	PARCEL 13	AREA	.302		12.3500	1.42	
	PARCEL 17	AREA	.991		12.3500	4.67	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	.991		12.3500	4.67	PARCEL 17
		DL	.991		12.3500	4.67	
		DN	1.443		12.3500	6.81	OUT 20
ADDLINK 50	ADD	UN	.151		12.3500	.71	1/2 PARCEL 28
		DL	.151		12.3500	.71	
		DN	1.443		12.3500	6.81	OUT 20
ADDLINK 60	ADD	UN	.302		12.3500	1.42	PARCEL 13
		DL	.302		12.3500	1.42	
		DN	1.443		12.3500	6.81	OUT 20

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	1/2 PARCEL 28	Subarea	1/2 PARCEL 28	Add Hyd	1/2 PARCEL 28
SCS UH	PARCEL 13	Subarea	PARCEL 13	Add Hyd	PARCEL 13
SCS UH	PARCEL 17	Subarea	PARCEL 17	Add Hyd	PARCEL 17

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd ADDLINK 50	Subarea 1/2 PARCEL 28	Jct OUT 20
Add Hyd ADDLINK 60	Subarea PARCEL 13	Jct OUT 20
Add Hyd ADDLINK 10	Subarea PARCEL 17	Jct OUT 20

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
1/2 PARCEL 28	AREA	.597		12.2500	4.89	
Outfall OUT 20	JCT	5.717		12.2500	46.84	
PARCEL 13	AREA	1.195		12.2500	9.79	
PARCEL 17	AREA	3.925		12.2500	32.16	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	3.925		12.2500	32.16	PARCEL 17
		DL	3.925		12.2500	32.16	
		DN	5.717		12.2500	46.84	OUT 20
ADDLINK 50	ADD	UN	.597		12.2500	4.89	1/2 PARCEL 28
		DL	.597		12.2500	4.89	
		DN	5.717		12.2500	46.84	OUT 20
ADDLINK 60	ADD	UN	1.195		12.2500	9.79	PARCEL 13
		DL	1.195		12.2500	9.79	
		DN	5.717		12.2500	46.84	OUT 20

HISTORIC ANALYSIS

ELKHORN DRAINAGE BASIN

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = 100Y24

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 5Y24H

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Index of Starting Page Numbers for ID Names

----- C -----
COLO SPRGS... 3.01

----- W -----
Watershed... 1.01, 2.01, 2.02, 2.03,
2.05, 2.06

Job File: X:\920000\POND-PACK\BLACK-PRE.PPW
Rain Dir: X:\920000\POND-PACK\

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JOB TITLE
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FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DETENTION FACILITY # 4 HISTORIC

BLACK SQUIRREL CREEK DRAINAGE BASIN

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********** DESIGN STORMS SUMMARY **********

COLO SPRGS..... Design Storms 3.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Pre100	4.4000	Synthetic Curve	TypeII 24hr
Pre 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
1/2 PARCEL 28	AREA	100	1.536		12.2500	12.58		
1/2 PARCEL 28	AREA	5	.388		12.3500	1.83		
1/2 PARCEL 3A	AREA	100	1.365		12.2500	11.19		
1/2 PARCEL 3A	AREA	5	.345		12.3500	1.63		
1/2 PARCEL-23	AREA	100	1.691		12.2500	13.86		
1/2 PARCEL-23	AREA	5	.427		12.3500	2.01		
1/2 PARCEL-24	AREA	100	1.226		12.2500	10.05		
1/2 PARCEL-24	AREA	5	.310		12.3500	1.46		
JUNC 40	JCT	100	5.733		12.2500	46.98		
JUNC 40	JCT	5	1.447		12.3500	6.83		
JUNC 50	JCT	100	4.368		12.2500	35.79		
JUNC 50	JCT	5	1.103		12.3500	5.20		
JUNC 60	JCT	100	6.570		12.3000	51.30		
JUNC 60	JCT	5	1.659		12.4000	7.56		
*OUT 20	JCT	100	15.461		12.3500	112.51		
*OUT 20	JCT	5	3.903		12.4500	16.76		
PARCEL 29 WEST	AREA	100	3.669		12.2500	30.06		
PARCEL 29 WEST	AREA	5	.926		12.3500	4.37		
PARCEL-10	AREA	100	1.621		12.2500	13.28		
PARCEL-10	AREA	5	.409		12.3500	1.93		
PARCEL-15	AREA	100	1.451		12.2500	11.89		
PARCEL-15	AREA	5	.366		12.3500	1.73		
PARCEL-29 EAST	AREA	100	2.901		12.2500	23.77		
PARCEL-29 EAST	AREA	5	.732		12.3500	3.45		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
1/2 PARCEL 28	AREA	.388		12.3500	1.83	
1/2 PARCEL 3A	AREA	.345		12.3500	1.63	
1/2 PARCEL-23	AREA	.427		12.3500	2.01	
1/2 PARCEL-24	AREA	.310		12.3500	1.46	
JUNC 40	JCT	1.447		12.3500	6.83	
JUNC 50	JCT	1.103		12.3500	5.20	
JUNC 60	JCT	1.659		12.4000	7.56	
Outfall OUT 20	JCT	3.903		12.4500	16.76	
PARCEL 29 WEST	AREA	.926		12.3500	4.37	
PARCEL-10	AREA	.409		12.3500	1.93	
PARCEL-15	AREA	.366		12.3500	1.73	
PARCEL-29 EAST	AREA	.732		12.3500	3.45	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5
Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 100	ADD	UN	.427		12.3500	2.01	1/2 PARCEL-23
		DL	.427		12.3500	2.01	
		DN	1.103		12.3500	5.20	JUNC 50
ADDLINK 110	ADD	UN	.345		12.3500	1.63	1/2 PARCEL 3A
		DL	.345		12.3500	1.63	
		DN	1.447		12.3500	6.83	JUNC 40
ADDLINK 120	ADD	UN	.366		12.3500	1.73	PARCEL-15
		DL	.366		12.3500	1.73	
		DN	1.103		12.3500	5.20	JUNC 50
ADDLINK 130	ADD	UN	1.103		12.3500	5.20	JUNC 50
		DL	1.103		12.3500	5.20	
		DN	1.447		12.3500	6.83	JUNC 40
ADDLINK 140	ADD	UN	.388		12.3500	1.83	1/2 PARCEL 28
		DL	.388		12.3500	1.83	
		DN	3.903		12.4500	16.76	OUT 20
ADDLINK 150	ADD	UN	.926		12.3500	4.37	PARCEL 29 WEST
		DL	.926		12.3500	4.37	
		DN	1.659		12.4000	7.56	JUNC 60
ADDLINK 170	ADD	UN	1.447		12.3500	6.83	JUNC 40
		DL	1.447		12.3500	6.83	
		DN	3.903		12.4500	16.76	OUT 20

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 80	ADD	UN	.409		12.3500	1.93	PARCEL-10
		DL	.409		12.3500	1.93	
		DN	3.903		12.4500	16.76	OUT 20
ADDLINK 90	ADD	UN	.310		12.3500	1.46	1/2 PARCEL-24
		DL	.310		12.3500	1.46	
		DN	1.103		12.3500	5.20	JUNC 50
REACH 10	REACH	UN	.732		12.3500	3.45	PARCEL-29 EAST
		DL	.732		12.5000	3.44	
	(-Q)	DL	-.000		11.9500	-.01	
		DN	1.659		12.4000	7.56	JUNC 60
REACH 20	REACH	UN	1.659		12.4000	7.56	JUNC 60
		DL	1.659		12.5500	7.56	
	(-Q)	DL	-.000		11.9500	-.01	
		DN	3.903		12.4500	16.76	OUT 20

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	PARCEL-10	Subarea	PARCEL-10	Add Hyd	PARCEL-10
SCS UH	1/2 PARCEL-24	Subarea	1/2 PARCEL-24	Add Hyd	1/2 PARCEL-24
SCS UH	1/2 PARCEL-23	Subarea	1/2 PARCEL-23	Add Hyd	1/2 PARCEL-23
SCS UH	PARCEL-15	Subarea	PARCEL-15	Add Hyd	PARCEL-15
SCS UH	1/2 PARCEL 3A	Subarea	1/2 PARCEL 3A	Add Hyd	1/2 PARCEL 3A
SCS UH	1/2 PARCEL 28	Subarea	1/2 PARCEL 28	Add Hyd	1/2 PARCEL 28
SCS UH	PARCEL 29 WEST	Subarea	PARCEL 29 WEST	Add Hyd	PARCEL 29 WEST
SCS UH	PARCEL-29 EAST	Subarea	PARCEL-29 EAST	Reach	PARCEL-29 EAST

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd ADDLINK 100	Subarea 1/2 PARCEL-23	Jct JUNC 50
Add Hyd ADDLINK 90	Subarea 1/2 PARCEL-24	Jct JUNC 50
Add Hyd ADDLINK 120	Subarea PARCEL-15	Jct JUNC 50
Add Hyd ADDLINK 130	Jct JUNC 50	Jct JUNC 40
Add Hyd ADDLINK 110	Subarea 1/2 PARCEL 3A	Jct JUNC 40
Reach REACH 10	Subarea PARCEL-29 EAST	Jct JUNC 60
Add Hyd ADDLINK 150	Subarea PARCEL 29 WEST	Jct JUNC 60
Reach REACH 20	Jct JUNC 60	Jct OUT 20
Add Hyd ADDLINK 80	Subarea PARCEL-10	Jct OUT 20
Add Hyd ADDLINK 170	Jct JUNC 40	Jct OUT 20
Add Hyd ADDLINK 140	Subarea 1/2 PARCEL 28	Jct OUT 20

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL 28	AREA	1.536		12.2500	12.58	
	1/2 PARCEL 3A	AREA	1.365		12.2500	11.19	
	1/2 PARCEL-23	AREA	1.691		12.2500	13.86	
	1/2 PARCEL-24	AREA	1.226		12.2500	10.05	
	JUNC 40	JCT	5.733		12.2500	46.98	
	JUNC 50	JCT	4.368		12.2500	35.79	
	JUNC 60	JCT	6.570		12.3000	51.30	
Outfall	OUT 20	JCT	15.461		12.3500	112.51	
	PARCEL 29 WEST	AREA	3.669		12.2500	30.06	
	PARCEL-10	AREA	1.621		12.2500	13.28	
	PARCEL-15	AREA	1.451		12.2500	11.89	
	PARCEL-29 EAST	AREA	2.901		12.2500	23.77	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 100	ADD	UN	1.691		12.2500	13.86	1/2 PARCEL-23
		DL	1.691		12.2500	13.86	
		DN	4.368		12.2500	35.79	JUNC 50
ADDLINK 110	ADD	UN	1.365		12.2500	11.19	1/2 PARCEL 3A
		DL	1.365		12.2500	11.19	
		DN	5.733		12.2500	46.98	JUNC 40
ADDLINK 120	ADD	UN	1.451		12.2500	11.89	PARCEL-15
		DL	1.451		12.2500	11.89	
		DN	4.368		12.2500	35.79	JUNC 50
ADDLINK 130	ADD	UN	4.368		12.2500	35.79	JUNC 50
		DL	4.368		12.2500	35.79	
		DN	5.733		12.2500	46.98	JUNC 40
ADDLINK 140	ADD	UN	1.536		12.2500	12.58	1/2 PARCEL 28
		DL	1.536		12.2500	12.58	
		DN	15.461		12.3500	112.51	OUT 20
ADDLINK 150	ADD	UN	3.669		12.2500	30.06	PARCEL 29 WEST
		DL	3.669		12.2500	30.06	
		DN	6.570		12.3000	51.30	JUNC 60
ADDLINK 170	ADD	UN	5.733		12.2500	46.98	JUNC 40
		DL	5.733		12.2500	46.98	
		DN	15.461		12.3500	112.51	OUT 20

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 80	ADD	UN	1.621		12.2500	13.28	PARCEL-10
		DL	1.621		12.2500	13.28	
		DN	15.461		12.3500	112.51	OUT 20
ADDLINK 90	ADD	UN	1.226		12.2500	10.05	1/2 PARCEL-24
		DL	1.226		12.2500	10.05	
		DN	4.368		12.2500	35.79	JUNC 50
REACH 10	REACH	UN	2.901		12.2500	23.77	PARCEL-29 EAST
		DL	2.901		12.4000	23.82	
	(-Q)	DL	-.000		.0000	.00	
		DN	6.570		12.3000	51.30	JUNC 60
REACH 20	REACH	UN	6.570		12.3000	51.30	JUNC 60
		DL	6.570		12.4500	51.15	
	(-Q)	DL	-.000		.0000	.00	
		DN	15.461		12.3500	112.51	OUT 20

File.... X:\920000\POND-PACK\
Title... FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

DETENTION FACILITY # 4 HISTORIC

BLACK SQUIRREL CREEK DRAINAGE BASIN

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

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JOB TITLE
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FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

SCHOOL SITE HISTORIC ANALYSIS

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Watershed..... Pre100
Executive Summary (Nodes) 2.05
Executive Summary (Links) 2.06

********** DESIGN STORMS SUMMARY **********

COLO SPRGS..... Design Storms 3.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Pre100	4.4000	Synthetic Curve	TypeII 24hr
Pre 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
JUNC 30	JCT	100	18.428		12.1500	179.09		
JUNC 30	JCT	5	5.511		12.2000	39.90		
OS-3	AREA	100	11.602		12.1500	124.30		
OS-3	AREA	5	3.788		12.2000	32.36		
*OUT 20	JCT	100	18.428		12.1500	179.09		
*OUT 20	JCT	5	5.511		12.2000	39.90		
PARCEL-27	AREA	100	6.826		12.2000	58.97		
PARCEL-27	AREA	5	1.723		12.3000	8.43		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	JUNC 30	JCT	5.511		12.2000	39.90	
	OS-3	AREA	3.788		12.2000	32.36	
Outfall	OUT 20	JCT	5.511		12.2000	39.90	
	PARCEL-27	AREA	1.723		12.3000	8.43	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 120	ADD	UN	3.788		12.2000	32.36	OS-3
		DL	3.788		12.2000	32.36	
		DN	5.511		12.2000	39.90	JUNC 30
ADDLINK 130	ADD	UN	1.723		12.3000	8.43	PARCEL-27
		DL	1.723		12.3000	8.43	
		DN	5.511		12.2000	39.90	JUNC 30
ADDLINK 260	ADD	UN	5.511		12.2000	39.90	JUNC 30
		DL	5.511		12.2000	39.90	
		DN	5.511		12.2000	39.90	OUT 20

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	OS-3	Subarea	OS-3	Add Hyd	OS-3
SCS UH	PARCEL-27	Subarea	PARCEL-27	Add Hyd	PARCEL-27

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd ADDLINK 120	Subarea OS-3	Jct JUNC 30
Add Hyd ADDLINK 130	Subarea PARCEL-27	Jct JUNC 30
Add Hyd ADDLINK 260	Jct JUNC 30	Jct OUT 20

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd ADDLINK 100	Subarea 1/2 PARCEL-23	Jct JUNC 50
Add Hyd ADDLINK 90	Subarea 1/2 PARCEL-24	Jct JUNC 50
Add Hyd ADDLINK 120	Subarea PARCEL-15	Jct JUNC 50
Add Hyd ADDLINK 130	Jct JUNC 50	Jct JUNC 40
Add Hyd ADDLINK 110	Subarea 1/2 PARCEL 3A	Jct JUNC 40
Reach REACH 10	Subarea PARCEL-29 EAST	Jct JUNC 60
Add Hyd ADDLINK 150	Subarea PARCEL 29 WEST	Jct JUNC 60
Reach REACH 20	Jct JUNC 60	Jct OUT 20
Add Hyd ADDLINK 80	Subarea PARCEL-10	Jct OUT 20
Add Hyd ADDLINK 170	Jct JUNC 40	Jct OUT 20
Add Hyd ADDLINK 140	Subarea 1/2 PARCEL 28	Jct OUT 20

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 120	ADD	UN	11.602		12.1500	124.30	OS-3
		DL	11.602		12.1500	124.30	
		DN	18.428		12.1500	179.09	JUNC 30
ADDLINK 130	ADD	UN	6.826		12.2000	58.97	PARCEL-27
		DL	6.826		12.2000	58.97	
		DN	18.428		12.1500	179.09	JUNC 30
ADDLINK 260	ADD	UN	18.428		12.1500	179.09	JUNC 30
		DL	18.428		12.1500	179.09	
		DN	18.428		12.1500	179.09	OUT 20

File.... X:\920000\POND-PACK\
Title... FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

SCHOOL SITE HISTORIC ANALYSIS

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Index of Starting Page Numbers for ID Names

----- C -----
COLO SPRGS... 3.01

----- W -----
Watershed... 1.01, 2.01, 2.02, 2.03,
2.05, 2.06

==========
JOB TITLE
==========

FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

BUSINESS AREA HISTORIC ANALYSIS
DETENTION FACILITY #2

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Watershed..... Pre100
Executive Summary (Nodes) 2.06
Executive Summary (Links) 2.07

********** DESIGN STORMS SUMMARY **********

COLO SPRGS..... Design Storms 3.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: COLO SPRGS

Return Event	Total Depth in	Rainfall Type	RNF ID
Pre100	4.4000	Synthetic Curve	TypeII 24hr
Pre 5	2.7000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
1/2 PARCEL-2	AREA	100	.790		12.2500	6.47		
1/2 PARCEL-2	AREA	5	.199		12.3500	.94		
1/2 PARCEL-22	AREA	100	.478		12.2500	3.92		
1/2 PARCEL-22	AREA	5	.121		12.3500	.57		
1/2 PARCEL-24	AREA	100	3.115		12.2500	25.52		
1/2 PARCEL-24	AREA	5	.786		12.3500	3.71		
1/2 PARCEL-30	AREA	100	3.925		12.2500	32.16		
1/2 PARCEL-30	AREA	5	.991		12.3500	4.68		
*OUT 20	JCT	100	13.336		12.2500	109.26		
*OUT 20	JCT	5	3.367		12.3500	15.89		
PARCEL-11	AREA	100	.768		12.2500	6.29		
PARCEL-11	AREA	5	.194		12.3500	.92		
PARCEL-12	AREA	100	.853		12.2500	6.99		
PARCEL-12	AREA	5	.215		12.3500	1.02		
PARCEL-23	AREA	100	.676		12.2500	5.54		
PARCEL-23	AREA	5	.171		12.3500	.80		
PARCEL-25	AREA	100	2.730		12.2500	22.37		
PARCEL-25	AREA	5	.689		12.3500	3.25		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL-2	AREA	.199		12.3500	.94	
	1/2 PARCEL-22	AREA	.121		12.3500	.57	
	1/2 PARCEL-24	AREA	.786		12.3500	3.71	
	1/2 PARCEL-30	AREA	.991		12.3500	4.68	
Outfall	OUT 20	JCT	3.367		12.3500	15.89	
	PARCEL-11	AREA	.194		12.3500	.92	
	PARCEL-12	AREA	.215		12.3500	1.02	
	PARCEL-23	AREA	.171		12.3500	.80	
	PARCEL-25	AREA	.689		12.3500	3.25	

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	.121		12.3500	.57	1/2 PARCEL-22
		DL	.121		12.3500	.57	
		DN	3.367		12.3500	15.89	OUT 20
ADDLINK 20	ADD	UN	.991		12.3500	4.68	1/2 PARCEL-30
		DL	.991		12.3500	4.68	
		DN	3.367		12.3500	15.89	OUT 20
ADDLINK 30	ADD	UN	.199		12.3500	.94	1/2 PARCEL-2
		DL	.199		12.3500	.94	
		DN	3.367		12.3500	15.89	OUT 20
ADDLINK 40	ADD	UN	.194		12.3500	.92	PARCEL-11
		DL	.194		12.3500	.92	
		DN	3.367		12.3500	15.89	OUT 20
ADDLINK 50	ADD	UN	.786		12.3500	3.71	1/2 PARCEL-24
		DL	.786		12.3500	3.71	
		DN	3.367		12.3500	15.89	OUT 20
ADDLINK 60	ADD	UN	.689		12.3500	3.25	PARCEL-25
		DL	.689		12.3500	3.25	
		DN	3.367		12.3500	15.89	OUT 20
ADDLINK 70	ADD	UN	.171		12.3500	.80	PARCEL-23
		DL	.171		12.3500	.80	
		DN	3.367		12.3500	15.89	OUT 20

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 80	ADD	UN	.215		12.3500	1.02	PARCEL-12
		DL	.215		12.3500	1.02	
		DN	3.367		12.3500	15.89	OUT 20

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	1/2 PARCEL-22	Subarea	1/2 PARCEL-22	Add Hyd	1/2 PARCEL-22
SCS UH	1/2 PARCEL-30	Subarea	1/2 PARCEL-30	Add Hyd	1/2 PARCEL-30
SCS UH	1/2 PARCEL-2	Subarea	1/2 PARCEL-2	Add Hyd	1/2 PARCEL-2
SCS UH	PARCEL-11	Subarea	PARCEL-11	Add Hyd	PARCEL-11
SCS UH	1/2 PARCEL-24	Subarea	1/2 PARCEL-24	Add Hyd	1/2 PARCEL-24
SCS UH	PARCEL-25	Subarea	PARCEL-25	Add Hyd	PARCEL-25
SCS UH	PARCEL-23	Subarea	PARCEL-23	Add Hyd	PARCEL-23
SCS UH	PARCEL-12	Subarea	PARCEL-12	Add Hyd	PARCEL-12

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd ADDLINK 30	Subarea 1/2 PARCEL-2	Jct OUT 20
Add Hyd ADDLINK 10	Subarea 1/2 PARCEL-22	Jct OUT 20
Add Hyd ADDLINK 50	Subarea 1/2 PARCEL-24	Jct OUT 20
Add Hyd ADDLINK 20	Subarea 1/2 PARCEL-30	Jct OUT 20
Add Hyd ADDLINK 40	Subarea PARCEL-11	Jct OUT 20
Add Hyd ADDLINK 80	Subarea PARCEL-12	Jct OUT 20
Add Hyd ADDLINK 70	Subarea PARCEL-23	Jct OUT 20
Add Hyd ADDLINK 60	Subarea PARCEL-25	Jct OUT 20

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

	Node ID	Type	HYG Vol ac-ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
	1/2 PARCEL-2	AREA	.790		12.2500	6.47	
	1/2 PARCEL-22	AREA	.478		12.2500	3.92	
	1/2 PARCEL-24	AREA	3.115		12.2500	25.52	
	1/2 PARCEL-30	AREA	3.925		12.2500	32.16	
Outfall	OUT 20	JCT	13.336		12.2500	109.26	
	PARCEL-11	AREA	.768		12.2500	6.29	
	PARCEL-12	AREA	.853		12.2500	6.99	
	PARCEL-23	AREA	.676		12.2500	5.54	
	PARCEL-25	AREA	2.730		12.2500	22.37	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 10	ADD	UN	.478		12.2500	3.92	1/2 PARCEL-22
		DL	.478		12.2500	3.92	
		DN	13.336		12.2500	109.26	OUT 20
ADDLINK 20	ADD	UN	3.925		12.2500	32.16	1/2 PARCEL-30
		DL	3.925		12.2500	32.16	
		DN	13.336		12.2500	109.26	OUT 20
ADDLINK 30	ADD	UN	.790		12.2500	6.47	1/2 PARCEL-2
		DL	.790		12.2500	6.47	
		DN	13.336		12.2500	109.26	OUT 20
ADDLINK 40	ADD	UN	.768		12.2500	6.29	PARCEL-11
		DL	.768		12.2500	6.29	
		DN	13.336		12.2500	109.26	OUT 20
ADDLINK 50	ADD	UN	3.115		12.2500	25.52	1/2 PARCEL-24
		DL	3.115		12.2500	25.52	
		DN	13.336		12.2500	109.26	OUT 20
ADDLINK 60	ADD	UN	2.730		12.2500	22.37	PARCEL-25
		DL	2.730		12.2500	22.37	
		DN	13.336		12.2500	109.26	OUT 20
ADDLINK 70	ADD	UN	.676		12.2500	5.54	PARCEL-23
		DL	.676		12.2500	5.54	
		DN	13.336		12.2500	109.26	OUT 20

NETWORK SUMMARY -- LINKS

(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol ac-ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 80	ADD	UN	.853		12.2500	6.99	PARCEL-12
		DL	.853		12.2500	6.99	
		DN	13.336		12.2500	109.26	OUT 20

File.... X:\920000\POND-PACK\
Title... FLYING HORSE MASTER DEVELOPMENT DRAINAGE PLAN

BUSINESS AREA HISTORIC ANALYSIS
DETENTION FACILITY #2

DESIGN STORMS SUMMARY

Design Storm File,ID = COLO SPRGS

Storm Tag Name = Pre100

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 4.4000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = Pre 5

Data Type, File, ID = Synthetic Storm TypeII 24hr
Storm Frequency = 5 yr
Total Rainfall Depth= 2.7000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Index of Starting Page Numbers for ID Names

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COLO SPRGS... 3.01

----- W -----
Watershed... 1.01, 2.01, 2.02, 2.04,
2.06, 2.07

DRAINAGE MAP