

NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE
AND PERMANENT WATER QUALITY POND PROJECT
STRUTHERS RD AND NORTH GATE BLVD
CDOT PROJECT NO. C040-042 (21233)
FINAL PLANS

Design Engineer's Statement:
These detailed plans and specifications were prepared under my direction and supervision. Said plans and specifications have been prepared according to the criteria established by the County for detailed roadway, drainage, grading and erosion control plans and specifications, and said plans and specifications are in conformity with applicable master drainage plans and master transportation plans. Said plans and specifications meet the purposes for which the particular roadway and drainage facilities are designed and are correct to the best of my knowledge and belief. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparation of these detailed plans and specifications.

Vancl Fossinger, P.E. 11/12/2024
Engineer of Record Date



VICINITY MAP
SCALE 1"=2000'

El Paso County:
County plan review is provided only for general conformance with County Design Criteria. The County is not responsible for the accuracy and adequacy of the design, dimensions, and/or elevations which shall be confirmed at the job site. The County through the approval of this document assumes no responsibility for completeness and/or accuracy of this document.

Filed in accordance with the requirements of the El Paso County Land Development Code, Drainage Criteria Manual, Volumes 1 and 2, and Engineering Criteria Manual as amended.

In accordance with ECM Section 1.12, these construction documents will be valid for construction for a period of 2 years from the date signed by the El Paso County Engineer. If construction has not started within those 2 years, the plans will need to be resubmitted for approval, including payment of review fees at the Planning and Community Development Directors discretion.

[Signature] 4/2/2025
County Engineer / ECM Administrator Date

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File Name: 1.01 GEN - COVER.DWG		Date:	Comments	Init.				No Revisions:		COVER		CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:		03/27/25	Revised Shts. 6, 14, 45, 46, 48-51	VSF				Revised:		Designer:	NAB	Structure Numbers	Sheet Number
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GENERAL NOTES

- THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2023) REFERRED TO AS THE STANDARD SPECIFICATIONS, EXCEPT WHERE OTHERWISE NOTED IN THE PROJECT PLANS AND THE PROJECT SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL HAVE A COPY OF ALL APPLICABLE STANDARDS ON SITE FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL ACQUIRE ALL PERMITS AND INSPECTIONS NECESSARY TO COMPLETE THE WORK PRESENTED HEREIN.
- “THE ENGINEER” SHALL MEAN THE COUNTY ENGINEER OF EL PASO COUNTY OR THEIR DESIGNATED REPRESENTATIVE. THE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL CONSTRUCTION EASEMENTS WITH THE COUNTY.
- THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS AT THE CONTRACTORS EXPENSE. CONSTRUCTION ACTIVITIES, IN ADDITION TO NORMAL CONSTRUCTION PROCEDURES, SHALL INCLUDE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SITE-SPECIFIC STAGING PLAN FOR ACCESS TO THE WORK AREAS AND FIELD FACILITIES TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION OF TEMPORARY INGRESS/EGRESS WILL NOT BE PAID FOR SEPARATELY. EARTHWORK, DRAINAGE, AND OTHER ITEMS RELATED TO THE ACCESS SHALL BE SUBSIDIARY TO THE WORK INCLUDING EROSION CONTROL MEASURE FOR RESTORATION OF THE SITE TO ORIGINAL CONDITIONS.
- PROJECT SUPERINTENDENT SHALL BE AVAILABLE ON A 24 HOURS/7 DAYS PERIOD AND CREW WILL RESPOND WITHIN 4 HOURS OF CONTACT.

PROJECT ACTIVITY NOTES

- ALL QUANTITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO COMPLETE THE CONSTRUCTION SHOWN IN THESE PLANS.
- ALL MATERIAL AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE COUNTY’S REPRESENTATIVE.
- ALL WORK SHALL BE DONE TO THE LINES, GRADES, SECTIONS, AND ELEVATIONS SHOWN ON THE PLANS UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
- LIMITS OF REMOVAL ITEMS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THEIR REMOVAL. IF DISCREPANCIES ARISE BETWEEN THE DEMOLITION AND THE NEW WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO DISTURBANCE.
- ALL EXCESS MATERIAL REMOVED FROM THE PROJECT NOT DESIGNATED IN THE CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ANY TEMPORARY EXCAVATION SUPPORT AS REQUIRED. EXCAVATION SHORING SHALL COMPLY WITH OSHA STANDARDS. COST FOR SHORING WILL BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID FOR SEPARATELY.

SURVEY NOTES

- STATIONS AND OFFSETS SHOWN REFERENCE THE CENTERLINE FOR THE PRIMARY DRAINAGE CONVEYANCE FACILITIES. ELEVATIONS SHOWN ARE TO FINISHED GRADE OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EASEMENTS AND RIGHT-OF-WAYS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL MONUMENTS, BENCHMARKS, RANGE TIES, PROPERTY MARKERS, REFERENCE POINTS AND STAKES. IN CASE OF HIS DESTRUCTION OF THESE, THE CONTRACTOR WILL BE RESPONSIBLE FOR RESETTING SAME, AT NO COST TO THE OWNER, AND SHALL BE RESPONSIBLE FOR ANY LOSS OF TIME THAT MAY BE CAUSED.
- ALL SURVEYING NECESSARY TO COMPLETE THE PROJECT WILL BE PAID FOR UNDER 1 LS CONSTRUCTION SURVEYING ITEM 625-00000.

TRAFFIC CONTROL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, REMOVAL, AND MAINTENANCE OF ALL NEW, EXISTING, AND TEMPORARY TRAFFIC CONTROL DEVICES LOCATED WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE PROJECT, PER THE PROJECT PLANS AND AS DIRECTED BY THE ENGINEER. THE DURATION OF THE PROJECT BEGINS FROM THE ISSUANCE OF THE NOTICE TO PROCEED UNTIL FINAL ACCEPTANCE OF THE PROJECT.
- EXISTING SIGNS IN CONFLICT WITH THE TEMPORARY CONDITIONS SHALL BE COVERED OR RESET AS NEEDED FOR EACH CONSTRUCTION PHASE AND AS DIRECTED BY THE ENGINEER. MASKING OF EXISTING SIGNS, INCLUDING THE COVERING MATERIALS AND FASTENING DEVICES, WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL SIGNAL OPERATIONAL EXPERTISE, MATERIALS, EQUIPMENT, AND STAFF, AS NECESSARY, TO IMPLEMENT AND MAINTAIN SIGNAL OPERATIONAL CHANGES FOR THE MODIFIED TRAFFIC SIGNALS LOCATED WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH CONSTRUCTION ZONE TRAFFIC CONTROL PHASING, PROJECT PLANS, AND AS DIRECTED BY THE ENGINEER.
- TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED BY WATERBLASTING OR OTHER COUNTY-APPROVED METHOD IN SUCH A MANNER AS TO CAUSE AS LITTLE DAMAGE AS POSSIBLE TO THE SURFACE TEXTURE OF THE PAVEMENT.
- THE CONTRACTOR SHALL BEAR RESPONSIBILITY AND EXPENSE FOR MAINTAINING ADEQUATE DRAINAGE AND SAFE DRIVING CONDITIONS AT ALL TIMES. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF RELATED WORK. SEE SWMP FOR DETAILS.
- THE CONTRACTOR SHALL REFER TO THE PROJECT SPECIAL PROVISIONS "TRAFFIC CONTROL PLAN - GENERAL" FOR WORK HOUR AND LANE CLOSURE RESTRICTIONS. THE CONTRACTOR SHALL PERFORM ALL WORK INVOLVING LANE CLOSURES IN COMPLIANCE WITH THE SPECIFIED RESTRICTIONS.ALL SIGNAGE AND STRIPING SHALL FOLLOW THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) LATEST EDITION, AND ALL APPLICABLE CDOT M&S STANDARDS. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A METHOD OF HANDLING TRAFFIC (MHT) TO THE ENGINEER FOR APPROVAL FOR EACH PHASE OF WORK.
- A PAVEMENT MARKING PLAN SHALL BE SUBMITTED BY THE CONTRACTOR PRIOR TO THE REMOVAL OF ANY EXISTING PAVEMENT MARKINGS, REMOVAL OF ASPHALT MAT, OR PCCP PAVING, PER SUBSECTION 627.03A OF THE STANDARD SPECIFICATIONS.
- ALL STRIPING (TEMPORARY AND PERMANENT) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN FULL COMPLIANCE PAVEMENT MARKINGS ON OPEN ROADWAYS DURING ALL PHASES OF CONSTRUCTION. TEMPORARY PAVEMENT MARKINGS AND REMOVAL OF TEMPORARY PAVEMENT MARKING WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
- THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY TRAFFIC CONTROL DEVICES THROUGHOUT THE DURATION OF CONSTRUCTION IN CONFORMANCE WITH APPROVED MHT'S.
- TEMPORARY OR PERMANENT STRIPING THAT DOES NOT MEET THE CONTRACT REQUIREMENTS OR PLACED WITH OVER SPRAY SHALL BE REMOVED AND REPLACED BY SANDBLASTING OR WATER BLASTING AT NO COST TO THE PROJECT. PAYMENT WILL NOT BE MADE FOR INFERIOR OR OVER SPRAYED STRIPING.
- THE TRAFFIC CONTROL SUPERVISOR SHALL COORDINATE CONSTRUCTION ZONE TRAFFIC CONTROL ACTIVITIES WITH ALL APPROPRIATE OFFICIALS, INCLUDING BUT NOT LIMITED TO THE ENGINEER, EMERGENCY SERVICES, POSTMASTER, ETC.
- THE CONTRACTOR SHALL MAINTAIN ACCESS THROUGH ALL EXISTING INTERSECTIONS ALL PROPERTIES IN THE PROJECT AREA AT ALL TIMES DURING CONSTRUCTION.

SIGNING NOTES:

- GROUND MOUNTED SIGNS SHALL BE INSTALLED PER CDOT M&S STANDARDS.
- THE CONTRACTOR SHALL INVENTORY ALL EXISTING SIGNS PRIOR TO CONSTRUCTION ACTIVITIES AND PROVIDE LIST TO THE ENGINEER.
- SIGN LOCATIONS ARE TO BE APPROVED BY THE ENGINEER BEFORE BEING PLACED.



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34. THE CONTRACTOR SHALL REPAIR OR REPLACE AT THEIR EXPENSE ANY EXISTING SIGN THAT IS DAMAGED DURING CONSTRUCTION ACTIVITIES NOT SCHEDULED TO BE REMOVED.
- UTILITY NOTES
35. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 THREE BUSINESS DAYS IN ADVANCE OF ANY EXCAVATING OR GRADING.
36. UTILITY FACILITIES EXIST WITHIN THE LIMITS OF PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE AND COORDINATE WITH THE UTILITY OWNERS IN THEIR REMOVAL AND RELOCATION OPERATIONS AND DURING CONSTRUCTION SO THAT PROGRESS IS EXPEDITED.
37. IT IS ESTIMATED THAT 100 HOURS WILL BE REQUIRED FOR POTHOLING PAID AS ITEM 203-01597. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING WITH THE APPROPRIATE UTILITY REPRESENTATIVES TO BE ONSITE DURING POTHOLING AND SHALL LIKEWISE BE RESPONSIBLE FOR DETERMINING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL REFER TO THE UTILITY SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
38. THE LOCATIONS OF EXISTING STRUCTURES, PIPELINES, UTILITIES, ETC., SHOWN ON THE DRAWINGS HAVE BEEN DERIVED FROM THE BEST AVAILABLE INFORMATION. THERE MAY BE OTHER STRUCTURES, PIPELINES, UTILITIES, ETC., NOT SHOWN ON THE DRAWINGS WHICH PRESENTLY EXIST IN THE AREA OF CONSTRUCTION. THE ENGINEER AND/OR OWNER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL IMPACTED EXISTING STRUCTURES, PIPELINES, UTILITIES, ETC., IN THE PROJECT SITE, AND SHALL BE RESPONSIBLE FOR ANY DAMAGES THERETO.
39. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL UTILITIES AND STRUCTURES AFFECTED BY THE WORK AND ANY DAMAGE SHALL BE REPAIRED AND RESTORED TO THE SATISFACTION OF THE ENGINEER OR APPLICABLE ENTITY AT THE CONTRACTOR'S EXPENSE.
40. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHERE UTILITIES CONFLICT WITH THE NEW WORK IN CONFORMANCE WITH THE SPECIFICATIONS. CONFLICT IS DEFINED WHERE THE NEW WORK CANNOT BE COMPLETED WITHOUT PROPER CLEARANCES AROUND THE UTILITY. WHERE FIELD VERIFICATION IS NOTED ON THE PLANS, THIS SHALL REQUIRE THE CONTRACTOR TO DETERMINE THE LOCATION OF THE FACILITY IN QUESTION PRIOR TO THE NEW CONSTRUCTION. A DETERMINATION SHALL BE MADE BY THE CONTRACTOR IF THE CURRENT DESIGN WILL MATCH THE EXISTING FACILITY AND NOTIFY THE ENGINEER IN WRITING IF IT DOES NOT.
- ENVIRONMENTAL NOTES
41. RESTORATION OF THE PROJECT AREA WILL INCLUDE REMOVAL OF ALL DEBRIS, LITTER, EXCAVATION SPOILS, AND WASTE MATERIALS GENERATED BY CONSTRUCTION.
42. IN ORDER TO AVOID VIOLATING THE MIGRATORY BIRD TREATY ACT OF 1918, IF ANY TREES OR SHRUBS ARE TO BE REMOVED OR WORK ON/UNDER BRIDGES IS TO BE COMPLETED BETWEEN APRIL 1 AND AUGUST 31, A SURVEY MUST BE COMPLETED FOR ACTIVE NESTS. IF AN ACTIVE NEST(S) IS FOUND NO WORK MAY BE DONE WITHIN 50 FEET OF THE NEST(S) UNTIL THE NEST(S) BECOMES INACTIVE. TO AVOID THE SURVEY REQUIREMENT, IT IS RECOMMENDED THAT ALL VEGETATION THAT NEEDS TO BE REMOVED, BE REMOVED AFTER AUGUST 31 AND BEFORE APRIL 1. SEE SPEC 240 FOR DETAILS. THE SURVEY WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
43. THE CONTRACTOR SHALL REMOVE ALL SEDIMENT AND CONSTRUCTION DEBRIS FROM THE FLOW LINES TO AVOID POLLUTANTS FROM DISCHARGING INTO WATERWAYS AS DIRECTED BY THE COUNTY'S REPRESENTATIVE. THE COST OF REMOVAL SHALL BE INCLUDED IN THE WORK.
44. FUELING AND ROUTINE MAINTENANCE OF CONSTRUCTION EQUIPMENT SHALL ONLY OCCUR AT DESIGNATED AREAS, AT LEAST 75 FEET FROM WETLAND AND AQUATIC HABITATS AND AWAY FROM DRAINAGE OR DITCHES TO PRECLUDE ADVERSE WATER QUALITY IMPACTS TO EXISTING DRAINAGES AND WETLAND HABITATS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT ADVERSE IMPACTS TO WATER QUALITY. MAJOR REPAIRS TO EQUIPMENT WILL BE MADE OFFSITE.
45. CONSTRUCTION EQUIPMENT SHALL BE CHECKED FREQUENTLY FOR LEAKS. ANY LEAKS OR SPILLS WILL BE CLEANED UP IMMEDIATELY TO PREVENT THE CONTAMINATION OF SOLID OR RESIDUE ON PAVED SURFACES. SPILL AREAS WILL NOT BE "HOSED DOWN", DRY CLEANUP METHODS WILL BE USED.
46. PUMPING AND/OR DISCHARGE OF WATER FROM DEWATERING OPERATIONS WILL REQUIRE A DISCHARGE PERMIT FROM THE CDPHE WATER QUALITY CONTROL DIVISION AND THE EPA. DISCHARGE PERMITS OR ALTERNATE ARRANGEMENTS FOR WATER

MANAGEMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (SEE STANDARD SPECIFICATION 107.25(B) 6). APPLICABLE CONDITIONS FOR THE DISCHARGE INCLUDING MONITORING AND REPORTING SHALL BE INCLUDED IN THE COST OF THE WORK AND SHALL NOT BE COMPENSATED SEPARATELY.

47. THE CONTRACTOR SHALL SAVE, PROTECT, AND MAINTAIN ALL EXISTING VEGETATION IN THE PROJECT, EXCEPT FOR THE VEGETATION THAT MUST BE REMOVED TO ACCOMMODATE CONSTRUCTION OF THE PROJECT.
48. THE CONTRACTOR SHALL FLAG TREES ADJACENT TO AND WITHIN THE LIMITS OF DISTURBANCE THAT ARE TO REMAIN IN PLACE. THE CONTRACTOR SHALL USE ALL APPROPRIATE CARE TO AVOID DAMAGE OR REMOVAL OF THE FLAGGED TREES. FLAGGED TREES THAT ARE DAMAGED SHALL BE REPLACED IN-KIND AT THE CONTRACTORS EXPENSE. TREES THAT ARE DAMAGED AND ASSESSED AS SALVAGEABLE SHALL BE PROMPTLY REPAIRED, PRUNED, WRAPPED, AND PROTECTED FROM FURTHER DAMAGE AT THE CONTRACTOR'S EXPENSE. ALL REPLACEMENT TREES AND SHRUBS SHALL BE NATIVE SPECIES PER THE COLORADO SPRINGS LANDSCAPE MANUAL.
49. THE CONTRACTOR SHALL REPAIR OR REPLACE IN-KIND ALL LANDSCAPE MATERIAL AND VEGETATION THAT IS DISTURBED BY THE WORK. REPLACED MATERIALS SHALL BE EQUAL OR BETTER THAN THE EXISTING MATERIALS IN SIZE, TYPE, AND CONDITION.
50. PORTIONS OF THE PROJECT LIE WITHIN HABITAT OF THE PREBLES MEADOW JUMPING MOUSE (PMJM), A MAMMAL PROTECTED UNDER THE FEDERAL ENDANGERED SPECIES ACT. SPECIAL MEASURES ARE REQUIRED TO MINIMIZE IMPACTS TO PMJM AND TO ITS HABITAT, INCLUDING, BUT NOT LIMITED TO:

A. A QUALIFIED ECOLOGIST OR LANDSCAPE ARCHITECT SHALL PROVIDE A BRIEFING TO THE CONTRACTOR AND THEIR ONSITE PERSONNEL PRIOR TO LAND DISTURBING ACTIVITIES TO DISCUSS THE PROJECT AND ENSURE UNDERSTANDING OF AVOIDANCE AND MINIMIZATION MEASURES.

B. AN ADEQUATE CONSTRUCTION FENCE SHALL BE CONSTRUCTED TO CONFINE PROJECT DISTURBANCES AND STAGING TO THE APPROVED DISTURBANCE LIMITS.

C. VEGETATION SHALL BE REESTABLISHED IN AREAS DISTURBED BY THE PROJECT AND ENHANCE THE HABITAT QUALITY IN ADJACENT AREAS IN ACCORDANCE WITH LANDSCAPE PLANS.

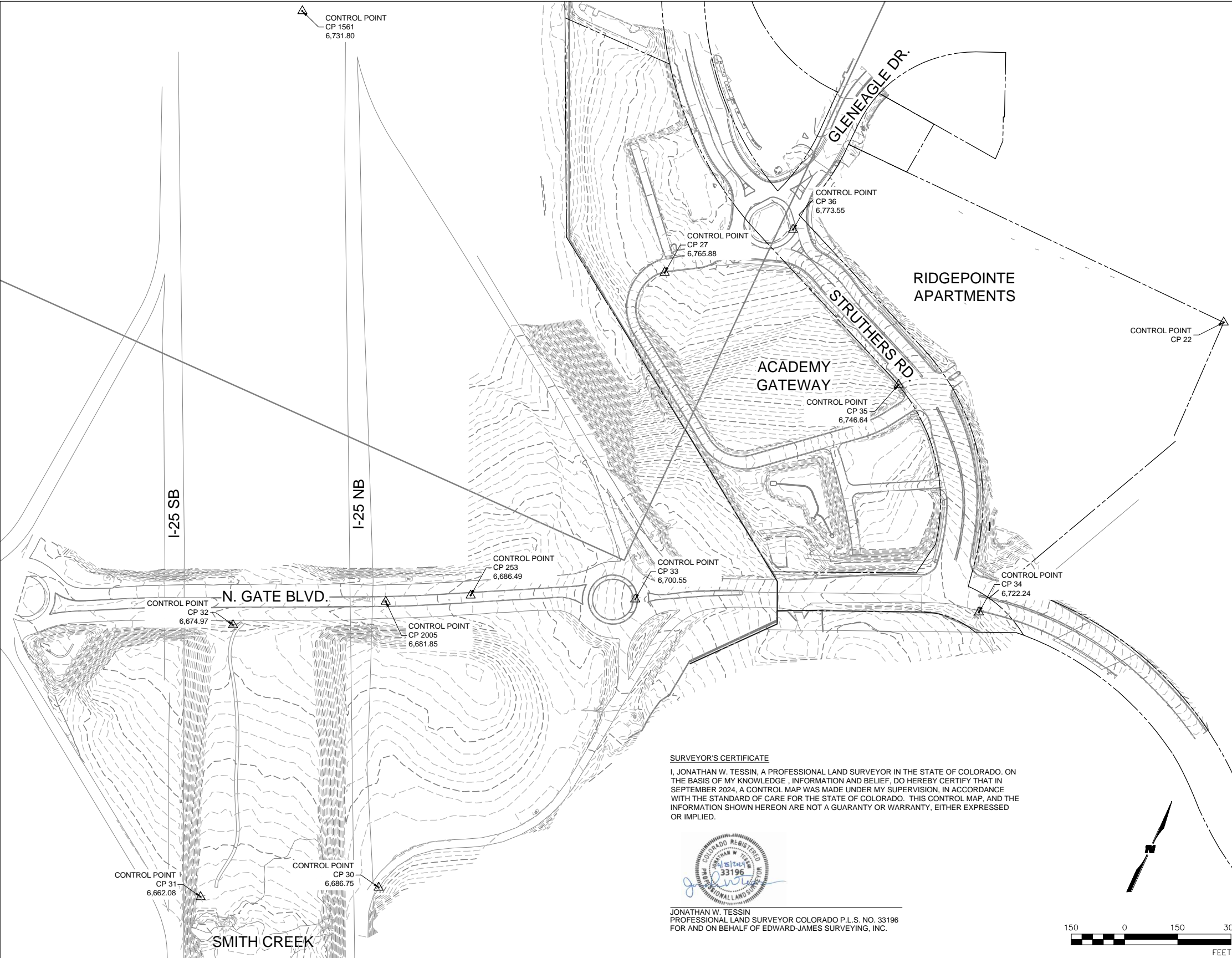
FACILITIES NOTES

51. LENGTH OF PIPE BETWEEN INLETS AND MANHOLES IS MEASURED FROM INSIDE EDGE TO INSIDE EDGE.
52. MANHOLE LIDS IN ROADWAYS SHALL BE PLACED SO THEY ARE NOT WITHIN WHEELPATHS.
53. ALL MANHOLE AND STRUCTURE PENETRATIONS SHALL BE FLUSH WITH THE INSIDE OF STRUCTURE WALL. NO PIPE PROTUSIONS WILL BE ALLOWED.
54. ALL PIPES SHALL BE RCP CLASS III UNLESS OTHERWISE NOTED ON THE PLANS.
55. ALL MANHOLES SHALL BE PER CDOT STANDARD PLANS M-604-20 EXCEPT AS NOTED ON THE PLANS.
56. CDOT TYPE C INLETS SHALL BE PER CDOT STANDARD PLANS M-604-10.
57. CDOT TYPE D INLETS SHALL BE PER CDOT STANDAR PLANS M-604-11 WITH LEVEL GRATE INSTALLATION.
58. CDOT TYPE R INLETS SHALL BE PER CDOT STANDARD PLANS M-604-12 EXCEPT AS NOTED ON THE PLANS.



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SURVEY CONTROL MAP

GENERAL NOTES

1. NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU DISCOVER SUCH DEFECT. IN NO EVENT MAY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE CERTIFICATION SHOWN HEREON.
2. PROJECT BENCHMARK: CONTROL POINT NO. 2005, ELEVATION = 6681.85 FT. NAVD88, A 1 INCH ZAPIT WASHER STAMPED WITH 'CSU FIMS CONTROL' SET IN THE TOP OF CONCRETE ON THE EASTERLY SIDE OF A GRATE INLET LOCATED IN THE MEDIAN AREA OF NORTHGATE BLVD, APPROXIMATELY 60 FEET EAST OF I-25 NORTHBOUND BRIDGE OVER NORTHGATE BLVD.
3. COORDINATE DATUM: PROJECT COORDINATES ARE MODIFIED COLORADO STATE PLANE CENTRAL ZONE NAD '83(92) (CHARN) COORDINATES. PROJECT COORDINATES ARE "GROUND" COORDINATES. THE COMBINED ELEVATION/SCALE FACTOR USED TO MODIFY THE COORDINATES FROM STATE PLANE TO PROJECT COORDINATES IS 1.000384948. THE RESULTING PROJECT COORDINATES ARE TRUNCATED BY 1,000,000 IN THE NORTHING AND 3,000,000 IN THE EASTING AFTER CONVERTING FROM STATE PLANE COORDINATES TO PROJECT COORDINATES.
4. PROJECT COORDINATES NORTHING US SURVEY FEET = (STATE PLANE COORDINATE NORTHING * 1.000384948 - 1,000,000). PROJECT COORDINATES EASTING US SURVEY FEET = (STATE PLANE COORDINATE EASTING * 1.000384948 - 3,000,000).
5. THIS TOPOGRAPHICAL SURVEY IS NOT A BOUNDARY SURVEY OF THE ADJOINING PROPERTY AND IS PREPARED FOR THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS PURPOSES ONLY. NO ANALYSIS HAS BEEN PERFORMED TO DETERMINE IF THE FOUND MONUMENTS SHOWN ARE IN THEIR PROPER POSITION, OR IF THEY ARE AT THE BOUNDARY CORNERS THEY MAY HAVE BEEN INTENDED TO REPRESENT. BOUNDARY LINES AS SHOWN HEREON ARE INCLUDED FOR INFORMATIONAL PURPOSES ONLY. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF TITLE POLICY, TITLE COMMITMENT, NOR TITE RESEARCH. EASEMENTS, RIGHTS, AND RESTRICTIONS OF RECORD AS SHOWN ARE FROM LIMITED AVAILABLE INFORMATION IN THE PUBLIC RECORD OF THE OFFICE OF THE EL PASO COUNTY CLERK AND RECORDER.

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
22	437505.35	192525.44	N/A	2-1/2" ALUMINUM CAP 1/16 CORNER PLS 10377
27	436965.44	191037.65	6765.88	CHISELED X ON CURB BY ELEC BOX
253	435909.77	190926.13	6686.49	NO. 5 REBAR
1561	437201.63	189800.33	6731.8	CDOT MP 156.1 - 3-1/2" ALUMINUM CAP
2005	435792.97	190716.45	6681.85	FIMS ZAPIT
30	435054.23	191039.08	6686.752	CP 30 5RBR 15FT EAST EOA
31	434818.09	190595.23	6662.082	CP 31 5RBR 15FT WEST TOE
32	435551.18	190354.56	6674.974	CP 32 MAG IN SE COR ELECTVAULT
33	436095.78	191351.22	6700.546	CP 33 MAG IN WALK
34	436472.25	192244.98	6722.243	CP 34 MAG SE COR INLET
35	436957.61	191768.91	6746.638	CP 35 MAG IN INLET
36	437228.37	191314.54	6773.549	CP 36 MAG IN WALK

SURVEYOR'S CERTIFICATE

I, JONATHAN W. TESSIN, A PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, ON THE BASIS OF MY KNOWLEDGE, INFORMATION AND BELIEF, DO HEREBY CERTIFY THAT IN SEPTEMBER 2024, A CONTROL MAP WAS MADE UNDER MY SUPERVISION, IN ACCORDANCE WITH THE STANDARD OF CARE FOR THE STATE OF COLORADO. THIS CONTROL MAP, AND THE INFORMATION SHOWN HEREON ARE NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED.



JONATHAN W. TESSIN
PROFESSIONAL LAND SURVEYOR COLORADO P.L.S. NO. 33196
FOR AND ON BEHALF OF EDWARD-JAMES SURVEYING, INC.



Print Date: November 12, 2024
File Name: 1.03 GEN- CONTROL MAP TO WILSON.DWG
Horiz. Scale: Vert. Scale:
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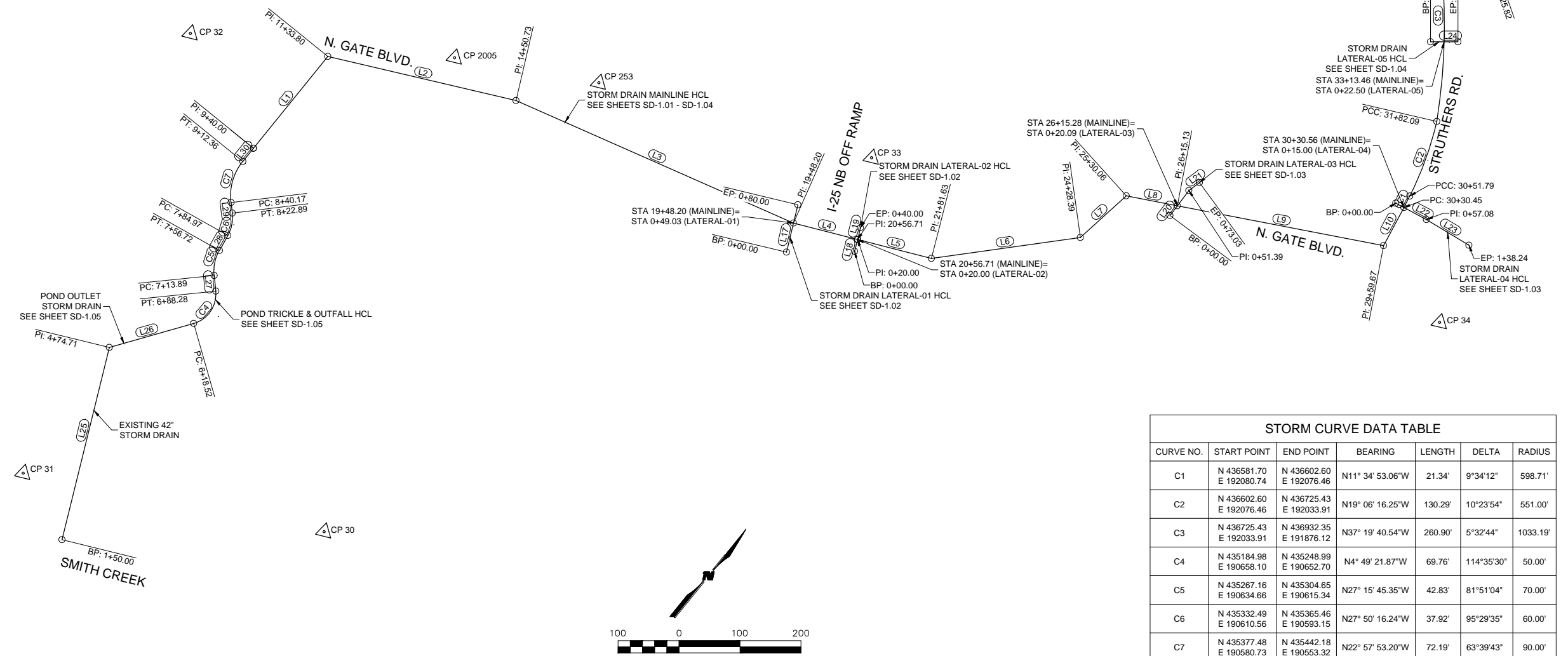


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As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT			Project No./Code	
No Revisions:		CONTROL MAP			CDOT Project No. C040-042 (21233)	
Revised:		Designer:	NAB	Structure Numbers	Sheet Number 04 OF 58	
Void:		Detailer:	KDL			
		Sheet Subset:	GENERAL	Subset Sheets:	GN-1.03	

PROJECT SURVEY CONTROL NOTES

1. PERMANENT MONUMENTS HAVE BEEN SET ON THE PROJECT SITE TO CONTROL THE WORK. (SEE SHEET GN-1.03 FOR DATA)
2. THE HORIZONTAL DATUM FOR THE PROJECT IS COLORADO STATE PLAN, CENTRAL ZONE, NORTH AMERICAN DATUM 1983 (1986).
3. THE VERTICAL DATUM FOR THE PROJECT IS LOCAL. VERTICAL CONTROL OF ALL PROJECT ELEMENTS SHALL BE BASED ON THE PROJECT ELEVATIONS PROVIDED FOR PROJECT CONTROL POINTS. (SEE SHEET GN-1.03)



STORM CURVE DATA TABLE						
CURVE NO.	START POINT	END POINT	BEARING	LENGTH	DELTA	RADIUS
C1	N 436581.70 E 192080.74	N 436602.60 E 192076.46	N11° 34' 53.06"W	21.34'	9°34'12"	598.71'
C2	N 436602.60 E 192076.46	N 436725.43 E 192033.91	N19° 06' 16.25"W	130.29'	10°23'54"	551.00'
C3	N 436725.43 E 192033.91	N 436932.35 E 191876.12	N37° 19' 40.54"W	260.90'	5°32'44"	1033.19'
C4	N 435184.98 E 190658.10	N 435248.99 E 190652.70	N4° 49' 21.87"W	69.76'	114°35'30"	50.00'
C5	N 435267.16 E 190634.66	N 435304.65 E 190615.34	N27° 15' 45.35"W	42.83'	81°51'04"	70.00'
C6	N 435332.49 E 190610.56	N 435365.46 E 190593.15	N27° 50' 16.24"W	37.92'	95°29'35"	60.00'
C7	N 435377.48 E 190580.73	N 435442.18 E 190553.32	N22° 57' 53.20"W	72.19'	63°39'43"	90.00'

STORM LINE DATA TABLE				
LINE NO.	START POINT	END POINT	BEARING	LENGTH
L1	N 435469.82 E 190553.32	N 435663.62 E 190553.32	N0°00'00.00"E	193.80'
L2	N 435663.62 E 190553.32	N 435801.58 E 190838.65	N64°11'43.76"E	316.93'
L3	N 435801.58 E 190838.65	N 435931.88 E 191318.76	N74°48'56.35"E	497.47'
L4	N 435931.88 E 191318.76	N 435977.18 E 191417.36	N65°19'43.97"E	108.51'
L5	N 435977.18 E 191417.36	N 436029.32 E 191530.88	N65°19'43.97"E	124.91'
L6	N 436029.32 E 191530.88	N 436209.77 E 191699.19	N43°00'26.25"E	246.77'
L7	N 436209.77 E 191699.19	N 436310.20 E 191715.01	N8°57'04.02"E	101.67'
L8	N 436310.20 E 191715.01	N 436350.20 E 191790.08	N61°57'11.11"E	85.06'
L9	N 436350.20 E 191790.08	N 436512.20 E 192094.17	N61°57'11.11"E	344.54'
L10	N 436512.20 E 192094.17	N 436581.70 E 192080.74	N10°56'04.69"W	70.78'
L11	N 436581.70 E 191876.12	N 437002.80 E 191919.68	N31°57'39.40"E	82.83'
L12	N 437002.80 E 191919.68	N 437029.14 E 191889.00	N49°21'11.66"W	40.44'
L13	N 437029.14 E 191889.00	N 437050.78 E 191839.67	N66°18'43.26"W	53.86'
L14	N 437050.78 E 191839.67	N 437050.17 E 191819.33	S88°17'16.58"W	20.35'
L15	N 437050.17 E 191819.33	N 437064.92 E 191785.81	N66°15'10.48"W	36.62'
L16	N 437064.92 E 191785.81	N 437226.32 E 191374.06	N68°35'44.98"W	442.25'
L17	N 435887.63 E 191339.87	N 435959.84 E 191305.42	N25°30'19.24"W	80.00'
L18	N 435959.84 E 191425.71	N 435977.18 E 191417.36	N24°40'16.03"W	20.00'
L19	N 435977.18 E 191417.36	N 435995.35 E 191409.02	N24°40'16.03"W	20.00'
L20	N 436330.20 E 191791.02	N 436381.55 E 191788.96	N2°17'53.52"W	51.39'
L21	N 436381.55 E 191788.96	N 436402.49 E 191794.41	N14°35'20.00"E	21.63'
L22	N 436578.96 E 192065.99	N 436589.76 E 192122.04	N79°05'31.68"E	57.08'
L23	N 436589.76 E 192122.04	N 436600.80 E 192202.45	N82°10'58.53"E	81.16'
L24	N 436820.47 E 191943.50	N 436848.75 E 191978.50	N51°02'57.34"E	45.00'
L25	N 434773.50 E 190713.39	N 435067.39 E 190575.31	N25°09'57.37"W	324.71'
L26	N 435067.39 E 190575.31	N 435184.98 E 190658.10	N35°08'47.61"E	143.81'
L27	N 435248.99 E 190652.70	N 435267.16 E 190634.66	N44°47'31.35"W	25.61'
L28	N 435304.65 E 190615.34	N 435332.49 E 190610.56	N9°43'59.35"W	28.25'
L29	N 435365.46 E 190593.15	N 435377.48 E 190580.73	N45°56'33.13"W	17.28'
L30	N 435442.18 E 190553.32	N 435469.82 E 190553.32	N0°00'46.74"E	27.65'

Print Date: November 12, 2024	<div><div></div><div></div><div></div><div></div></div>
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Revised:

Void:

NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE
AND PERMANENT WATER QUALITY POND PROJECT

HORIZONTAL CONTROL PLAN

Designer: NAB

Detailer: KDL

Sheet Subset: GENERAL

Structure Numbers

Subset Sheets: GN-1.04

Project No./Code

CDOT Project No. C040-042 (21233)

Sheet Number

05 OF 58

11/12/2024 C:\Users\mgorater?appdata?local\bentley\projectwise\wc\projects\d0398836\1.04 GEN - SUMMARY OF QUANTITIES.dwg

SUMMARY OF QUANTITIES NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT									
Item Code #	Description	Unit	Project Total	As-Const.	Item Code #	Description	Unit	Project Total	As-Const.
201-00000	Clearing and Grubbing	L S	1		506-00412	Soil Riprap (12 Inch)	CY	218	
202-00010	Removal of Tree	EACH	13		507-00105	Concrete Slope and Ditch Paving (Reinforced)(Colored)	CY	108.4	
202-00019	Removal of Inlet	EACH	1		507-00318	Grouted Boulder Edging (18 Inch)	LF	664	
202-00021	Removal of Manhole	EA	1		507-00336	Grouted Boulder Edging (36 Inch)	LF	110	
202-00035	Removal of Pipe (Storm Sewer)	LF	113		507-00348	Grouted Boulder Edging (48 Inch)	LF	170	
202-00036	Removal of Pipe (Special) (Gas Line)	LF	385		601-03055	Concrete Class D (Wall)(Special)	CY	5.1	
202-00037	Removal of End Section (Storm Sewer)	EACH	6		603-01185	18 Inch Reinforced Concrete Pipe (Complete In Place)	LF	9	
202-00195	Removal of Median Cover	SY	13		603-01245	24 Inch Reinforced Concrete Pipe (Complete In Place)	LF	608	
202-00203	Removal of Curb and Gutter	LF	305		603-01365	36 Inch Reinforced Concrete Pipe (Complete In Place)	LF	540	
202-00200	Removal of Sidewalk	SY	26		603-01485	48 Inch Reinforced Concrete Pipe (Complete In Place)	LF	1,548	
202-00220	Removal of Asphalt Mat	SY	3,065.0		603-05048	48 Inch Reinforced Concrete End Section	EACH	1	
202-00206	Removal of Concrete Curb Ramp	SY	12		604-00305	Inlet Type C (5 Foot)	EACH	1	
202-0026	Removal of Slope Paving	SY	2		604-00505	Inlet Type D (5 Foot)	EACH	1	
202-00027	Removal of Riprap (Rock Check Dam)	SY	29		604-19205	Inlet Type R L 10 (5 Foot)	EACH	2	
202-00810	Removal of Ground Sign	EACH	2		604-19410	Inlet Type R L 10 (Special)(10 Foot)	EACH	1	
202-04002	Clean Culvert	LS	1		604-20000	Outlet Structure	EACH	1	
203-00000	Unclassified Excavation (CIP)	CY	15,361		604-30010	Manhole Slab Base (10 Foot)	EACH	7	
203-00100	Muck Excavation	CY	100		604-30015	Manhole Slab Base (15 Foot)	EACH	6	
203-01597	Potholing	HOURL	100		604-32015	Manhole T-Base (15 Foot)	EACH	3	
208-00002	Erosion Log (12 Inch)	LF	400		604-32020	Manhole T-Base (20 Foot)	EACH	1	
208-00020	Silt Fence	LF	446		605-00060	6 In PP Underdrain (Special)	LF	538	
208-00035	Aggregate Bag	LF	48		605-01080	8" Horz. Drain (Special Trench Foundation Zone Treatment)	LF	1,200	
208-00041	Rock Check Dam	EACH	1		607-11525	Fence (Temporary)(4' High Plastic)	LF	2,744	
208-00045	Concrete Washout Structure	EACH	3		607-60117	16 Foot Gate (Chain Barrier)	EACH	1	
208-00056	Storm Drain Inlet Protection (Type III)	EACH	6		608-00000	Concrete Sidewalk	SY	27.0	
208-00070	Vehicle Tracking Pad	EACH	3		608-00010	Concrete Curb Ramp	SY	12.1	
208-00106	Sweeping (Sediment Removal)	HOURL	40		609-21010	Curb and Gutter Type 2 (Section I-B)	LF	35	
208-00207	Erosion Control Management (ECM)	DAY	64		609-21020	Curb and Gutter Type 2 (Section II-B)	LF	201	
210-04011	Adjust MH (Special)	EACH	1		610-00020	Median Cover Material (Patterned Concrete)	SF	37.0	
210-00810	Reset Ground Sign	EACH	2		610-0003X	10' Plowable Median Nose	LS	1.0	
212-00006	Seeding (Native)	ACRE	6.41		614-01582	Steel Sign Support (2-1/2 Inch Round)(Post and Slipbase)	LF	8	
212-00047	Soil Preparation (Special) (For Native Seeding)	ACRE	6.41		620-00005	Field Office	EACH	1	
212-00701	Compost (Mechanically Applied)	CY	838		620-00020	Sanitary Facility	EACH	2	
213-00011	Mulch (Hydraulic)	ACRE	6.41		625-00000	Construction Surveying	LS	1	
214-00000	Landscape Maintenance	L S	1		626-00000	Mobilization	LS	1	
214-00302	Deciduous Shrub (60 Cl)	EACH	320		627-00005	Epoxy Pavement Marking	GAL	10	
214-00350	Deciduous Shrub (5 Gallon Container)	EACH	184		627-30405	Preformed Thermoplastic Pavement Marking (Word-Symbol)	SF	20	
214-00205	Deciduous Tree (5 Gallon Container)	EACH	13		627-30410	Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line)	SF	40	
214-00450	Evergreen Tree (5 Gallon Container)	EACH	11		630-00007	Traffic Control Inspection	DAY	147	
214-01013	Live Willow Stakes	EACH	860		630-00012	Traffic Control Management	DAY	50	
216-00201	Soil Retention Blanket (Staw-Coconut) (Biodegradable Class 1)	SY	917		630-00016	Traffic Control (Special)	LS	1	
218-0000	Noxious Weed Management	LS	1		630-80355	Portable Message Sign Panel	EACH	2	
304-06007	Aggregate Base Course (Class 6)	CY	1,228		630-00000	Flagging	HOURL	500	
403-34722	HMA (Gr SX) (75) (PG 58-28) (6" Thick)	SY	3,076		700-70010	F/A Minor Contract Revisions	F A		
420-00114	Geotextile (Drainage) (Class 3)	SY	520		700-70426	F/A Post Construction Stabilization	F A		
506-00409	Soil Riprap (9 Inch)	CY	160						

EARTHWORK SUMMARY	
Item 203-00000 Unclassified Excavation (CIP)	15,361 CY
Excavation to the in contact outline of the proposed improvements on the pond site (excluding the storm sewer and underdrain trenching) Includes excavation of the top 3" of topsoil in the pond site fill areas.	
Estimated embankment volume to the in contact outline of proposed improvements on the pond site	10,016 CY
Estimated volume of excavated material needed to construct the proposed embankment assuming a 10% shrink factor.	11,018 CY
Estimated volume of excess storm sewer trench excavation material considering the volume displaced by the proposed pipe and an assumed 10% shrink factor.	1,136 CY
Estimated export & disposal of excess excavated material including 3" of topsoil from fill areas on the pond site.	5,479 CY

The total quantity of Unclassified Excavation to be paid for will be the bid form quantity unless the Engineer makes significant design changes after contract award that significantly impacts quantities. The contractor is encouraged to perform their own estimate of earthwork and other bid form quanties and bring any large discrepancies to the attention of the Engineer before completion and submittal of their bid.

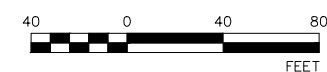
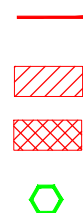


Print Date: November 12, 2024	<div>1</div>	Sheet Revisions					As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT		Project No./Code	
File Name: 1.04 GEN - SUMMARY OF QUANTITIES.DWG		Date:	Comments	Init.			No Revisions:		SUMMARY OF APPROXIMATE QUANTITIES		CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:		03/27/25	Quantity revision	VSF			Revised:		Designer: NAB	Structure Numbers	Sheet Number 06 OF 58	
Unit Information Unit Leader							Void:		Detailed: KDL			
									Sheet Subset: GENERAL	Subset Sheets: GN-1.05		

1. REMOVAL OF INFRASTRUCTURE THAT WILL BE REPLACED SHALL BE SCHEDULED IN A MANNER THAT MINIMIZES THE TIME BETWEEN REMOVAL AND REPLACEMENT OF THE FACILITY.
2. REMOVAL AND REPLACEMENT OF LANDSCAPE MATERIALS AND IRRIGATION COMPONENTS (IN KIND) AS REQUIRED TO CONSTRUCT THE PROJECT WILL BE CONSIDERED INCIDENTAL TO ASSOCIATED PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY.
3. THE EXTENTS AND QUANTITY OF PAVEMENT REMOVAL ARE BASED ON A SWATH ALONG THE MAINLINE HCL THAT EXTENDS 6' BEYOND THE OUTSIDE EDGE OF THE PIPE ON EITHER SIDE, EXCEPT WHERE THE PIPE RUNS ADJACENT TO EXISTING CURB AND GUTTER, IN WHICH CASE THE PAVEMENT SHALL BE REMOVED TO THE FACE OF THE GUTTER PAN. THE EXISTING CURB AND GUTTER SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE INDICATED IN THE PLANS.
4. EDGES OF PAVEMENT REMOVAL SHALL BE NEATLY SAWCUT.

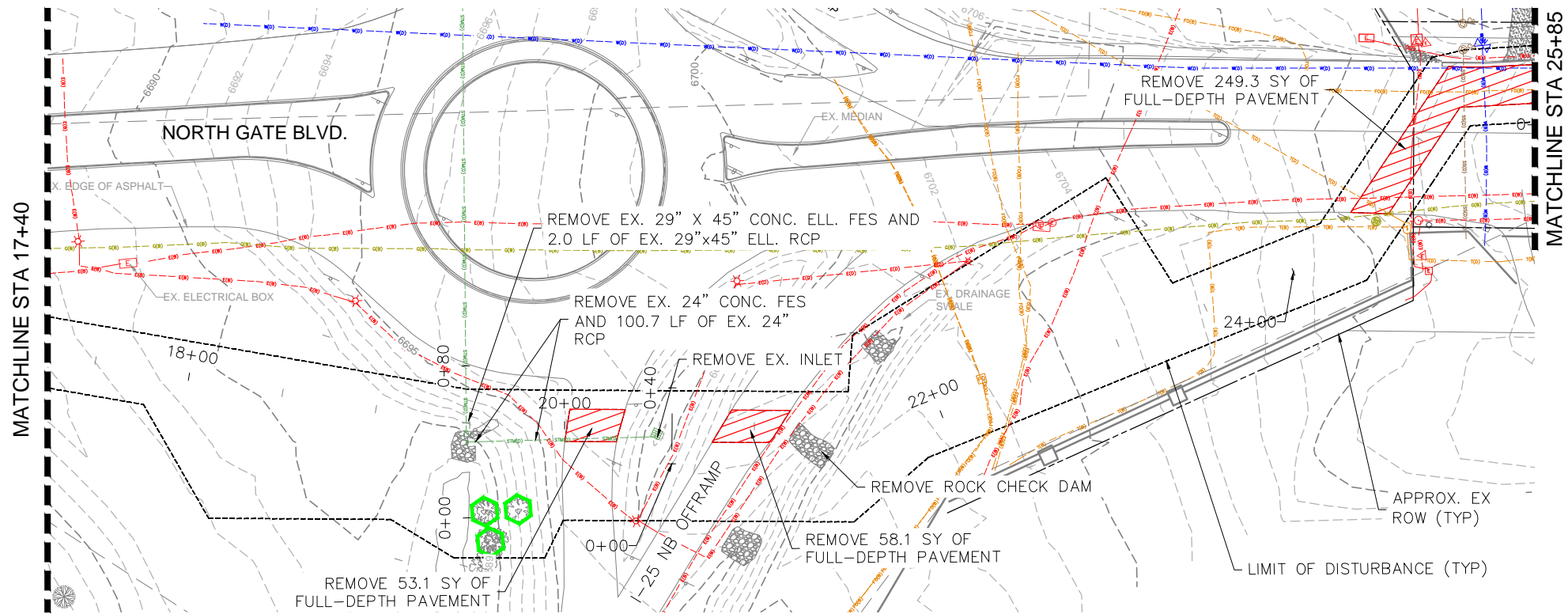


TREE TO REMAIN



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File Name: 1.01 - 1.04 REM - DEMOLITION PLANS.DWG		Date:	Comments	Init.		No Revisions:		DEMOLITION PLAN			CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:						Revised:	Designer:	NAB	Structure Numbers		Sheet Number 07 OF 58	
Unit Information Unit Leader							Detailer:	KDL				
							Void:	Sheet Subset:	REMOVAL	Subset Sheets:		

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NOTES:

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4. EDGES OF PAVEMENT REMOVAL SHALL BE NEATLY SAWCUT.

LEGEND

- REMOVAL OF CURB AND GUTTER
- REMOVAL OF ASPHALT MAT
- REMOVAL OF CONCRETE
- TREE TO REMAIN

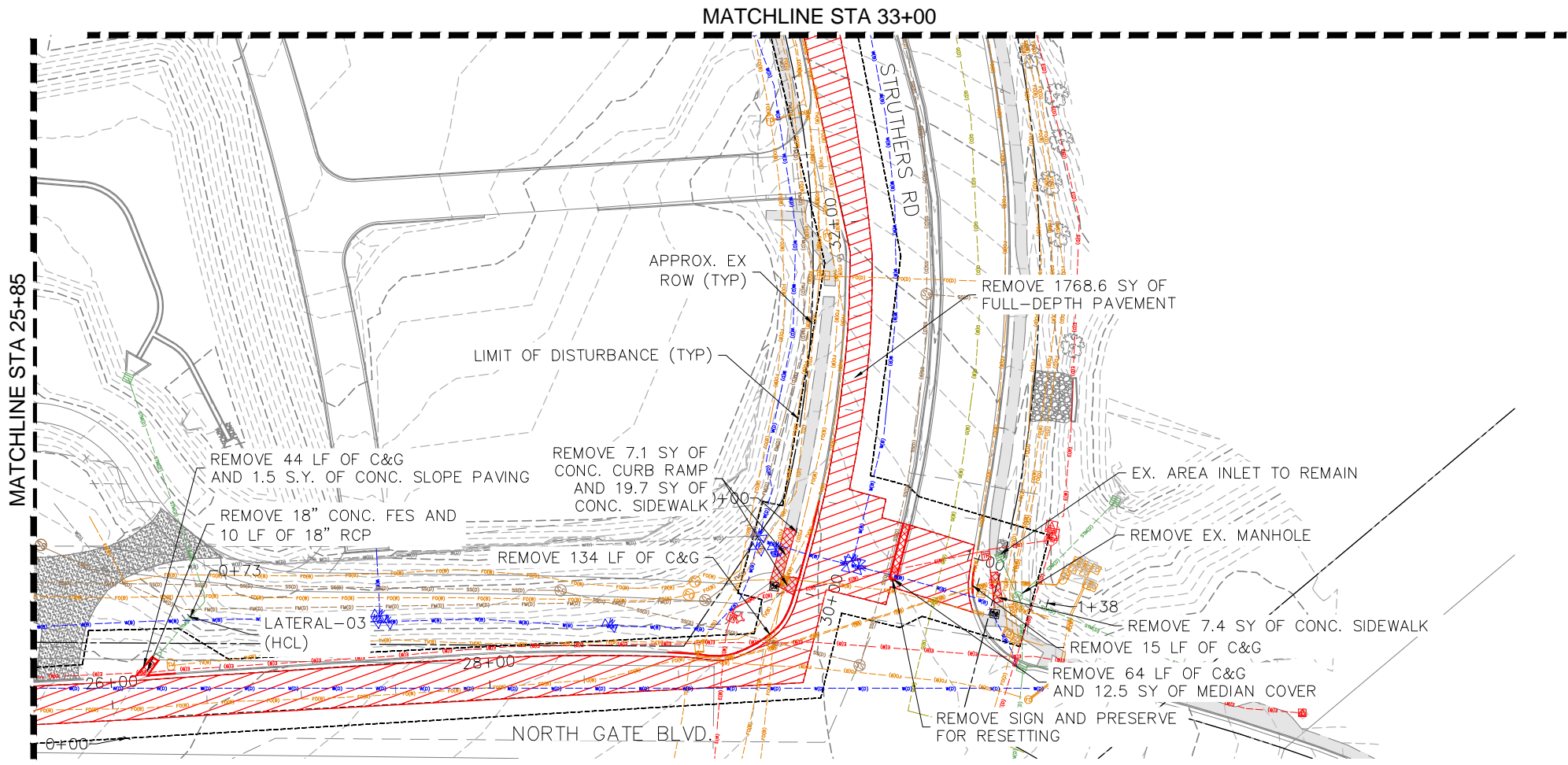


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No Revisions:		DEMOLITION PLAN		CDOT Project No. C040-042 (21233)	
Revised:		Designer: NAB	Structure Numbers	Sheet Number	
Void:		Detailer: KDL		08 OF 58	
		Sheet Subset: REMOVAL	Subset Sheets: DM-1.02		



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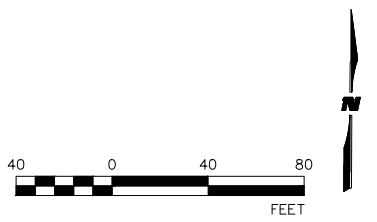
LEGEND

REMOVAL OF CURB AND GUTTER ———

REMOVAL OF ASPHALT MAT [Hatched Box]

REMOVAL OF CONCRETE [Cross-hatched Box]

TREE TO REMAIN [Green Hexagon]



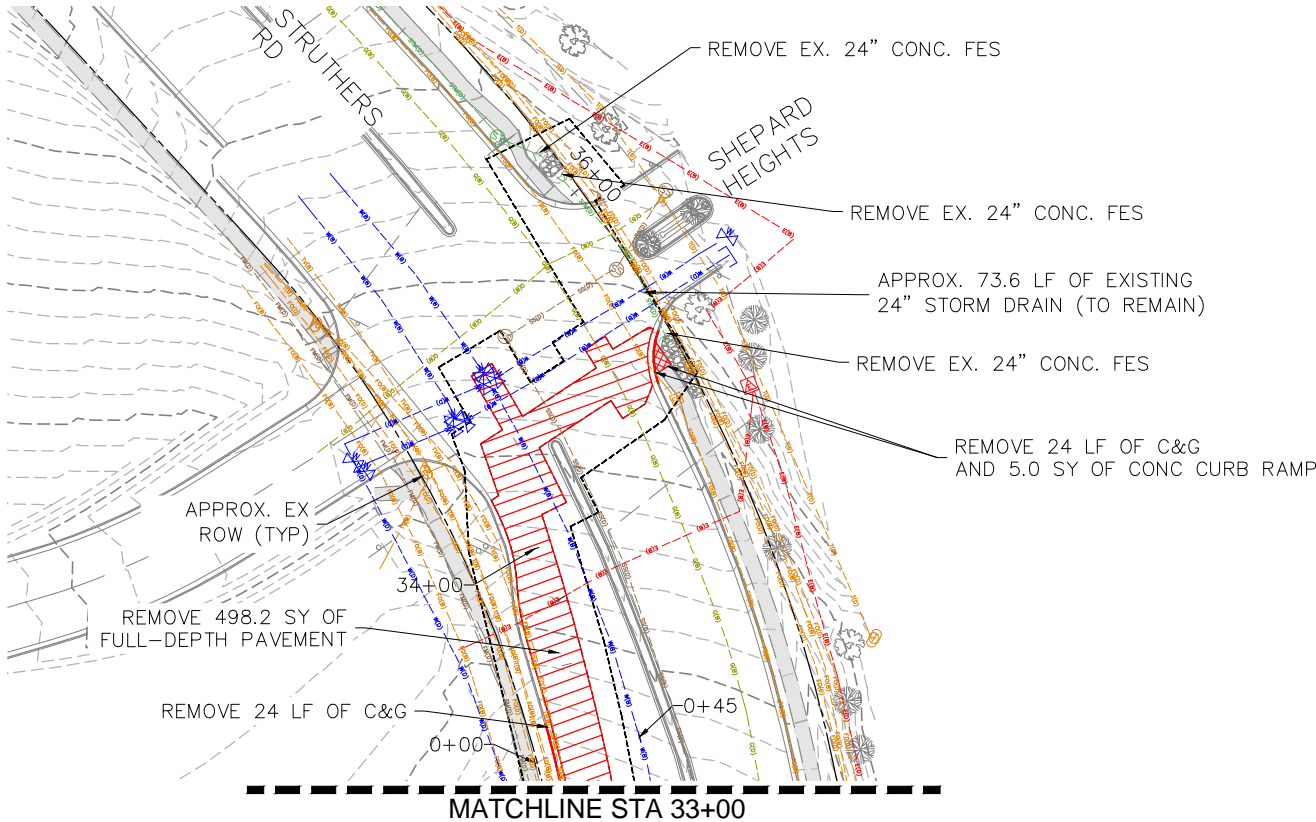
Print Date: November 12, 2024		<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			<div><div>811</div><div>Know what's below. Call before you dig.</div></div> <div><div><div><div></div><div></div><div></div></div><div><div>EL PASO COUNTY, COLORADO</div><div>EST. 1861</div></div></div><div><div><div>5755 Mark Dabbling Blvd. Suite 100 Colorado Springs, CO 80919</div><div>Phone: 719-520-5800 FAX: 719-520-0108</div></div><div><div><div>WILSON</div><div>& COMPANY</div></div></div></div></div>	As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT			Project No./Code	
File Name: 1.01 - 1.04 REM - DEMOLITION PLANS.DWG			Date:	Comments	Init.		No Revisions:		DEMOLITION PLAN			CDOT Project No. C040-042 (21233)	
Horiz. Scale:	Vert. Scale:						Revised:	Designer: NAB	Structure Numbers			Sheet Number	
Unit Information	Unit Leader							Detailer: KDL				09 OF 58	
							Void:	Sheet Subset: REMOVAL	Subset Sheets: DM-1.03				



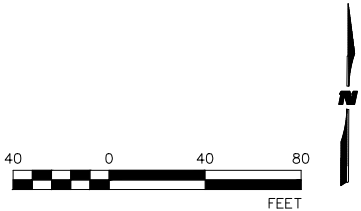
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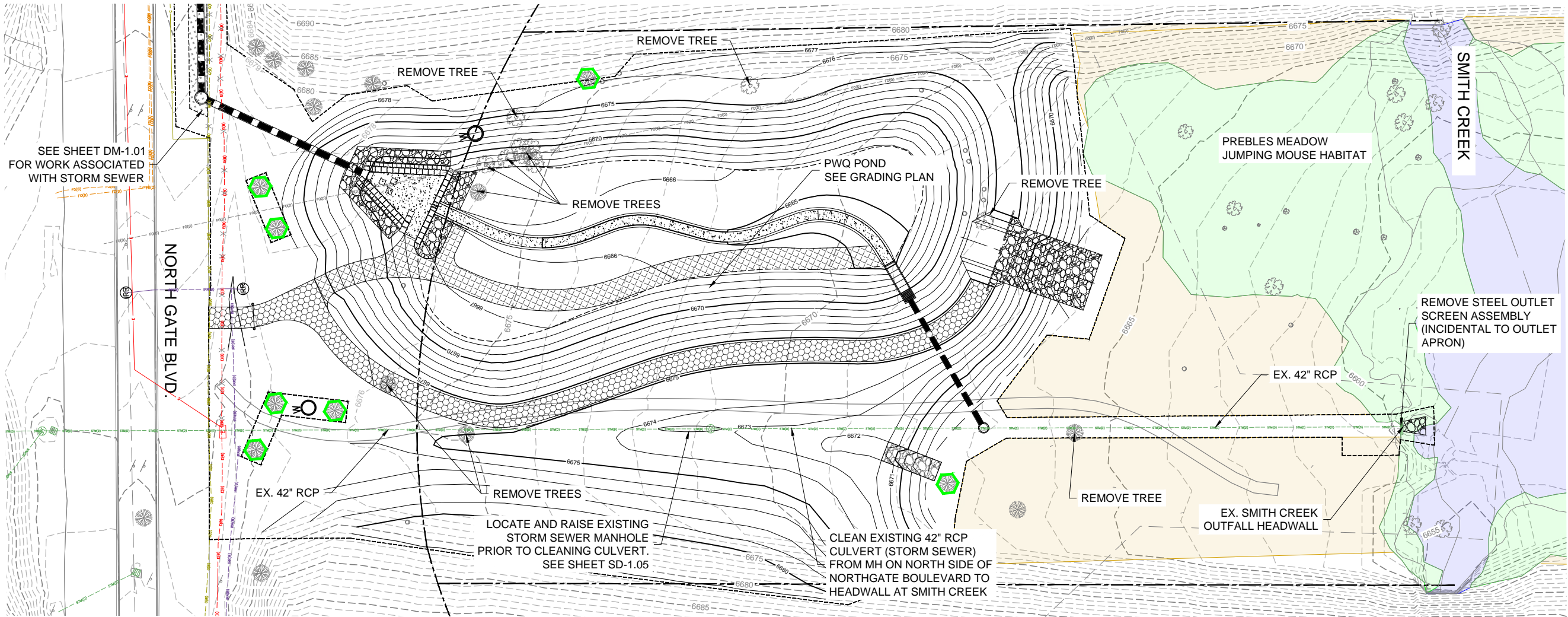


LEGEND	
REMOVAL OF CURB AND GUTTER	
REMOVAL OF ASPHALT MAT	
REMOVAL OF CONCRETE	
TREE TO REMAIN	



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File Name: 1.01 - 1.04 REM - DEMOLITION PLANS.DWG		Date:	Comments	Init.		No Revisions:		DEMOLITION PLAN			CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:						Revised:		Designer: NAB	Structure Numbers		Sheet Number	
Unit Information Unit Leader						Void:		Detailer: KDL			10 OF 58	
								Sheet Subset: REMOVAL	Subset Sheets: DM-1.04			

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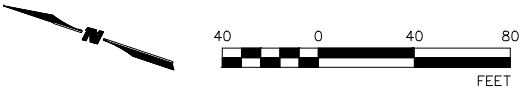


NOTES:

1. REMOVAL OF INFRASTRUCTURE THAT WILL BE REPLACED SHALL BE SCHEDULED IN A MANNER THAT MINIMIZES THE TIME BETWEEN REMOVAL AND REPLACEMENT OF THE FACILITY.
2. REMOVAL AND REPLACEMENT OF LANDSCAPE MATERIALS AND IRRIGATION COMPONENTS (IN KIND) AS REQUIRED TO CONSTRUCT THE PROJECT WILL BE CONSIDERED INCIDENTAL TO ASSOCIATED PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY.
3. THE EXTENTS AND QUANTITY OF PAVEMENT REMOVAL ARE BASED ON A SWATH ALONG THE MAINLINE HCL THAT EXTENDS 6' BEYOND THE OUTSIDE EDGE OF THE PIPE ON EITHER SIDE, EXCEPT WHERE THE PIPE RUNS ADJACENT TO EXISTING CURB AND GUTTER, IN WHICH CASE THE PAVEMENT SHALL BE REMOVED TO THE FACE OF THE GUTTER PAN. THE EXISTING CURB AND GUTTER SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE INDICATED IN THE PLANS.
4. EDGES OF PAVEMENT REMOVAL SHALL BE NEATLY SAWCUT.

LEGEND

REMOVAL OF CURB AND GUTTER	
REMOVAL OF ASPHALT MAT	
REMOVAL OF CONCRETE	
TREE TO REMAIN	
HIGH QUALITY PMJM HABITAT	
PMJM HABITAT UPLAND AREA	
OPEN WATERS IN PMJM HABITAT	

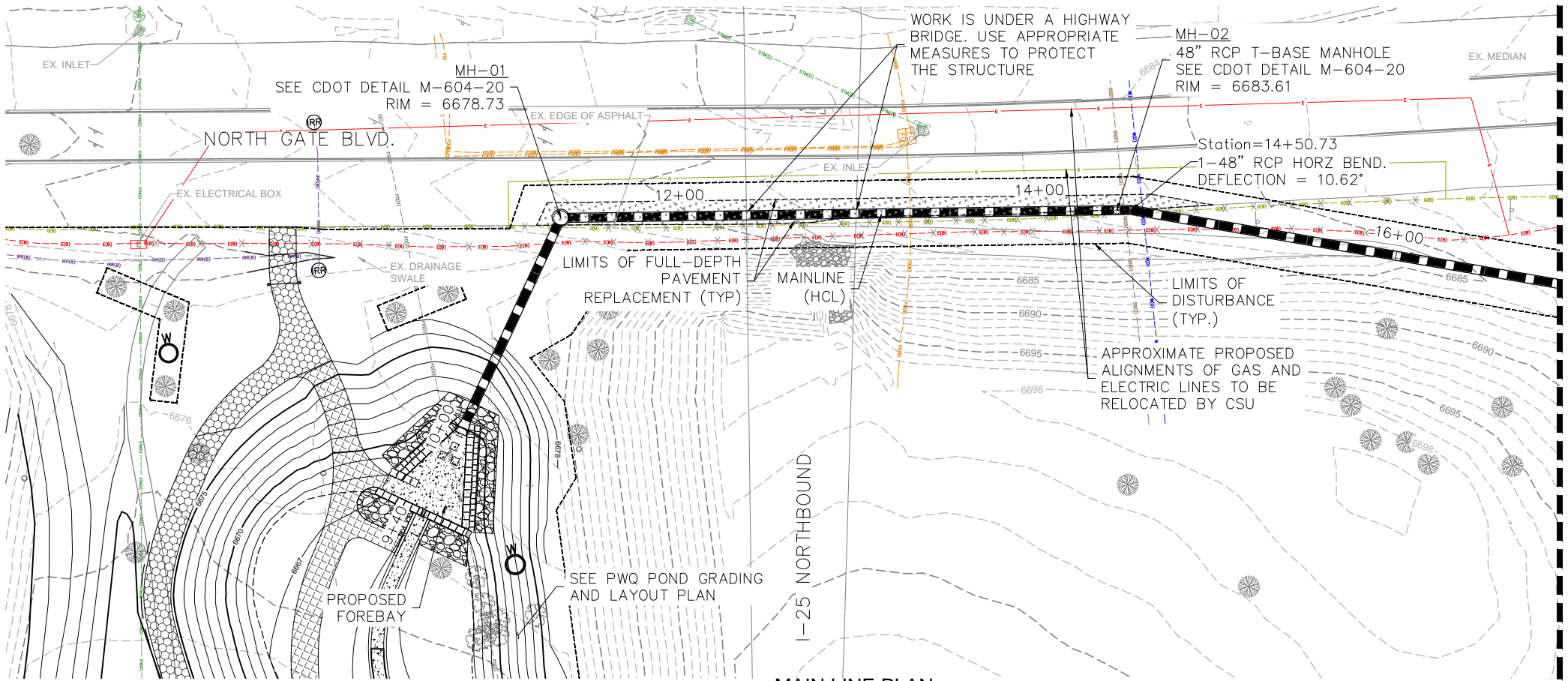


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File Name: 1.05 REM - DEMOLITION PLAN.DWG			Date:	Comments	Init.		No Revisions:		DEMOLITION PLAN			CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:							Revised:		Designer: NAB	Structure		Sheet Number	
Unit Information Unit Leader							Void:		Detailer: KDL	Numbers		11 OF 58	
									Sheet Subset: REMOVAL	Subset Sheets: DM-1.05			



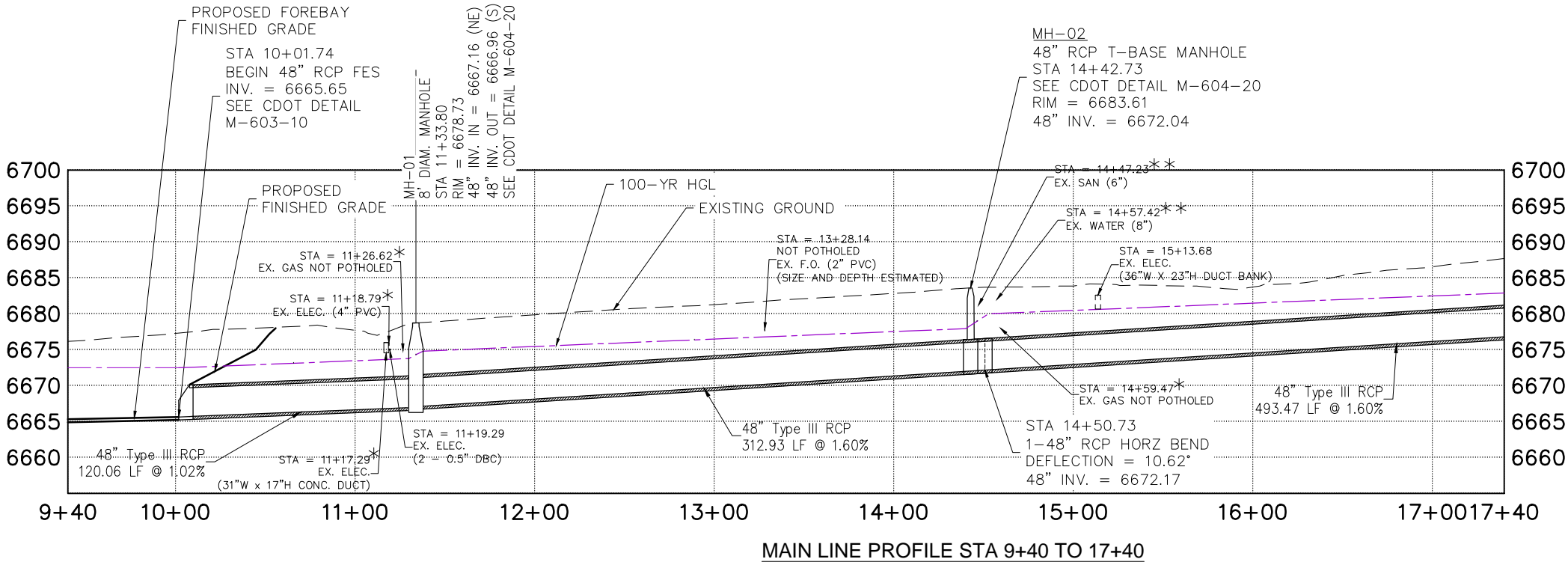
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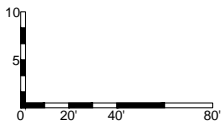
NOTES:

1. PIPE LENGTHS ARE MEASURED TO HORIZONTAL DEFLECTION POINT OF BENDS AND TO INNER FACE OF MANHOLE OR INLET.
2. PIPE SLOPES ARE MEASURED TO INNER FACE OF MANHOLE OR INLET AND HORIZONTAL DEFLECTION POINT OF HORIZONTAL BENDS.
3. HORIZONTAL CONTROL LINES (HCL) ARE TO CENTER OF PIPE.
4. MANHOLE STATION AND OFFSET ARE TO CENTER OF STRUCTURE.
5. INVERT OF STORM DRAIN HORIZONTAL BENDS AND T-BASE MANHOLES ARE TO BE CONTINUOUS AND FLUSH WITH CONNECTING SEGMENTS OF RCP PIPE.
6. INVERT OF T-BASE MANHOLES ARE TO CENTER OF MANHOLE.
7. WHERE GAS AND ELECTRIC ARE TO BE LOWERED BY CSU CONTRACTOR SHALL PROVIDE EXCAVATION, BACKFILL, AND PAVEMENT REMOVAL AND REPLACEMENT. EXCAVATION AND BACKFILL ASSOCIATED WIT THE UTILITY RELOCATIONS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE STORM DRAIN ITEMS.
8. T-BASES FOR T-BASE MANHOLES ARE ASSUMED TO BE 8' LONG AND ARE EXCLUDED FROM THE STORM SEWER PAYMENT QUANTITY.



NOTE: SEE UTILITY PLANS FOR FURTHER EXISTING UTILITY INFORMATION

- * UTILITY TO BE RELOCATED BY CSU PRIOR TO CONSTRUCTION. CONTRACTOR TO CONFIRM ABANDONMENT PRIOR TO DISTURBANCE OF UTILITY.
- ** THESE LINES ARE INDICATED TO BE INSTALLED THROUGH BORING. THEIR DEPTHS ARE UNKNOWN.



Print Date: November 12, 2024
File Name: 1.01 - 1.04 STM - PLAN & PROFILE.DWG
Horiz. Scale: Vert. Scale:
Unit Information Unit Leader

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Date:	Comments	Init.	



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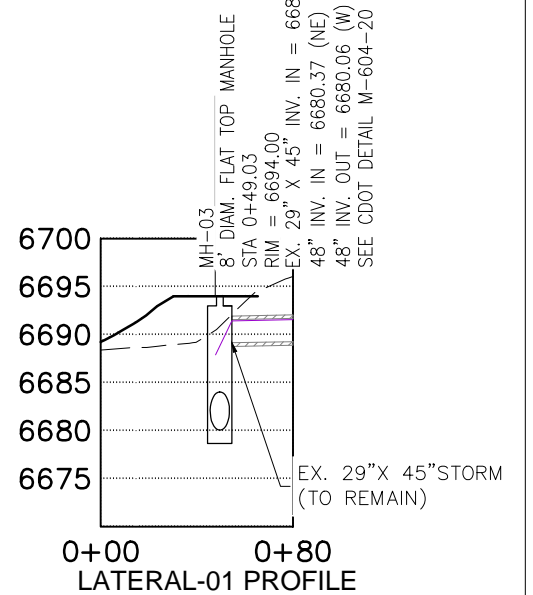
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Void:

NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT			
STORM DRAIN PLAN AND PROFILE			
Designer:	NAB	Structure	
Detailer:	KDL	Numbers	
Sheet Subset:	STORM	Subset Sheets:	SD-1.01

Project No./Code
CDOT Project No. C040-042 (21233)
Sheet Number
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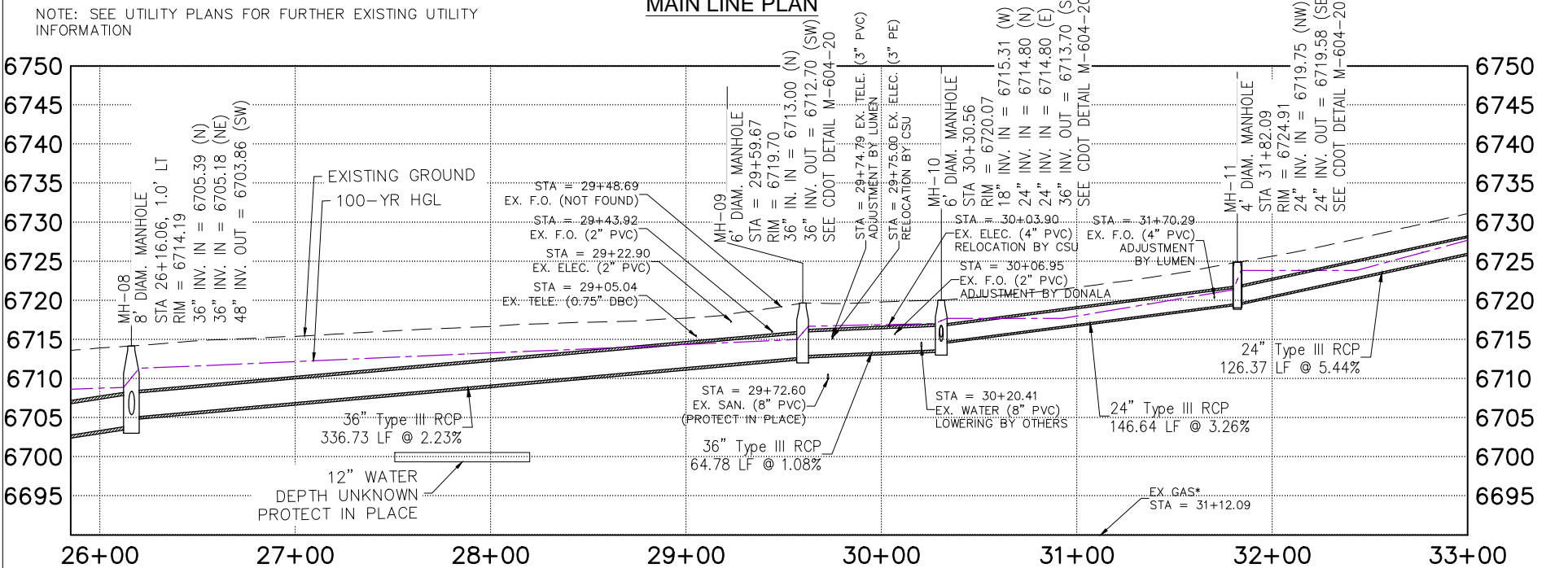
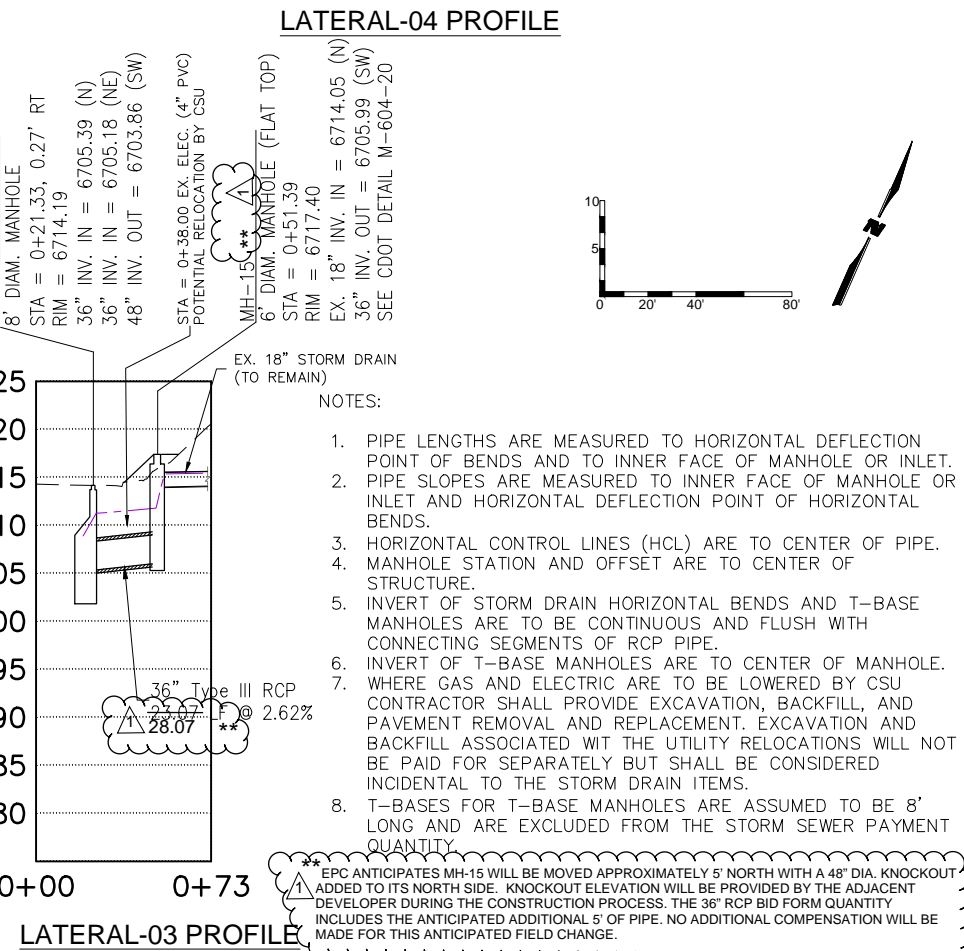
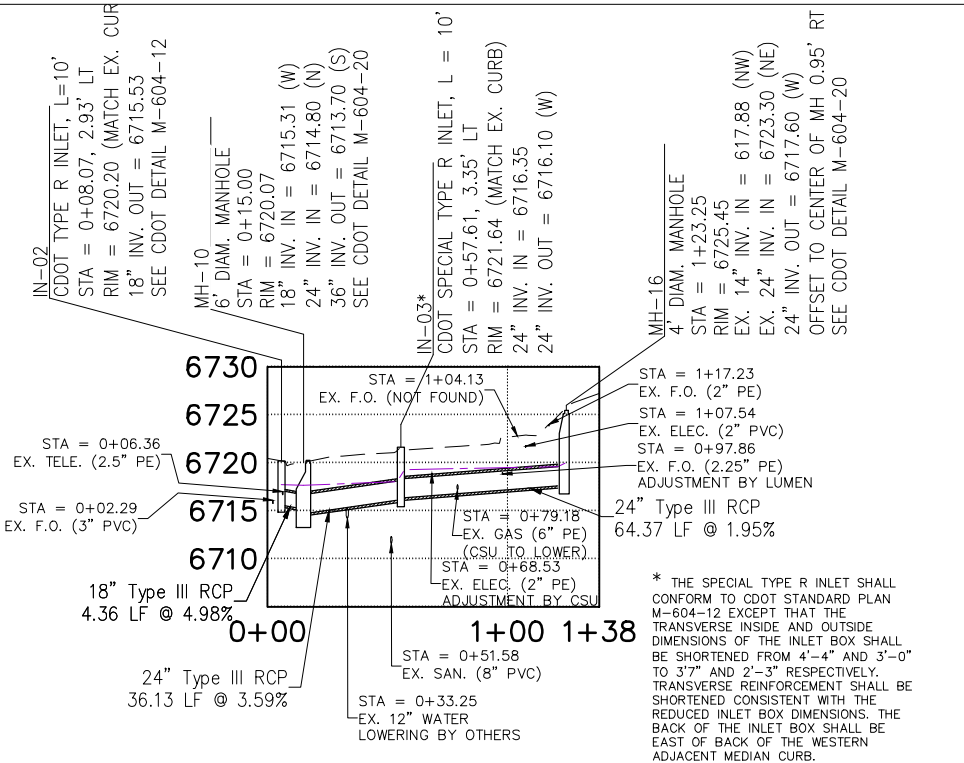
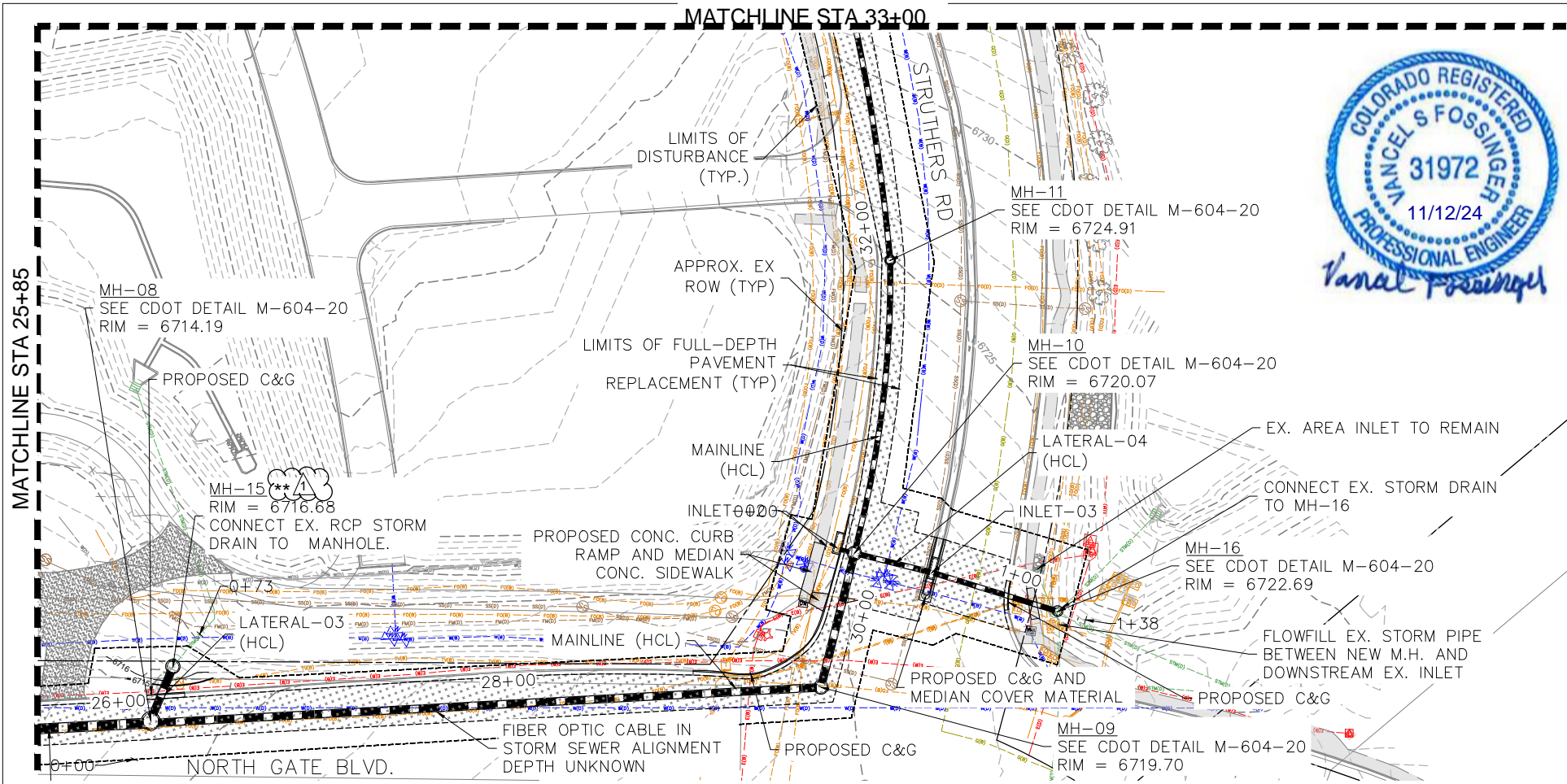


1. PIPE LENGTHS ARE MEASURED TO HORIZONTAL DEFLECTION POINT OF BENDS AND TO INNER FACE OF MANHOLE OR INLET.
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File Name: 1.01 – 1.04 STM – PLAN & PROFILE.DWG											No Revisions:		CDOT Project No. C040-042 (21233)
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Print Date: November 12, 2024

File Name: 1.01 - 1.04 STM - PLAN & PROFILE.DWG

Horiz. Scale: Vert. Scale:

Unit Information Unit Leader

Sheet Revisions

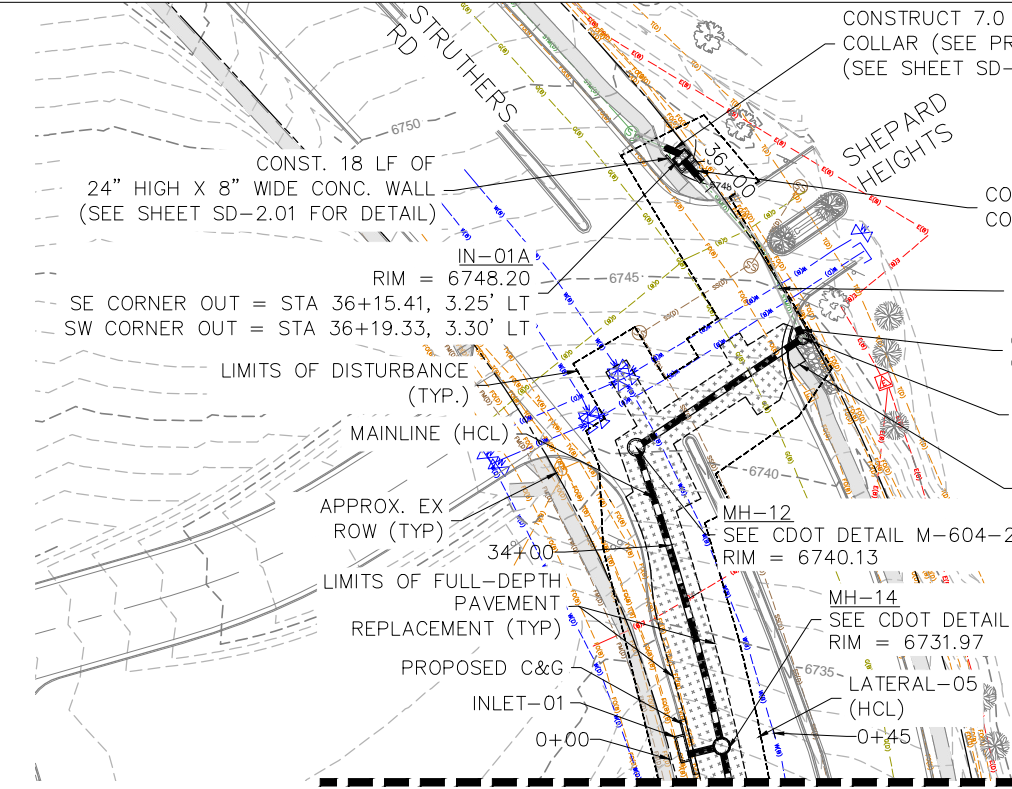
Date:	Comments	Init.
03/27/25	Added MH # 15 note	VSF

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No Revisions:	STORM DRAIN PLAN AND PROFILE		CDOT Project No. C040-042 (21233)
Revised:	Designer: NAB	Structure Numbers	Sheet Number
Void:	Detailer: KDL	Subset Sheets: SD-1.03	14 OF 58

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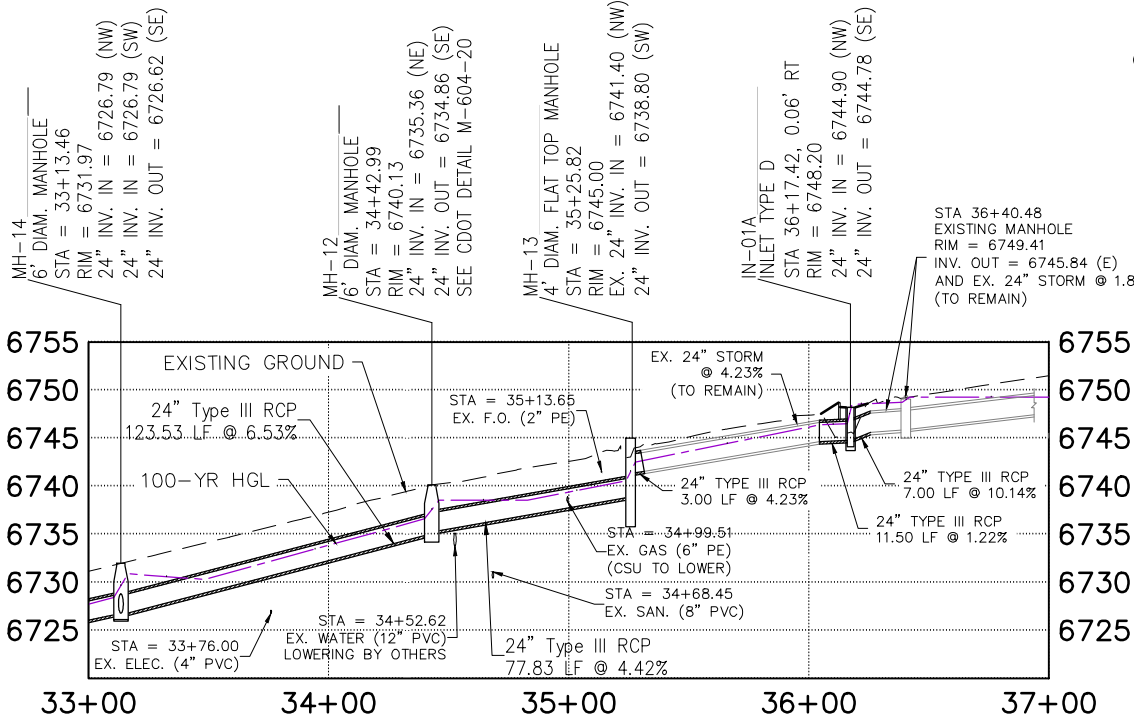


MATCHLINE STA 33+00
MAIN LINE PLAN

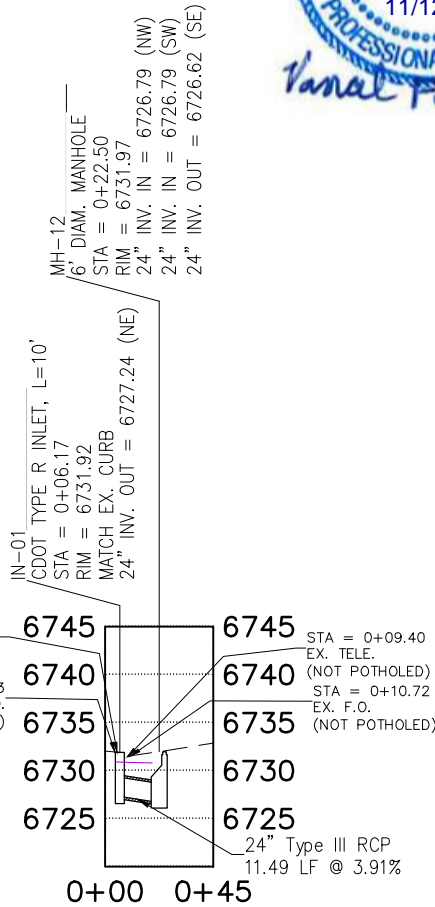
NOTE: SEE UTILITY PLANS FOR FURTHER EXISTING UTILITY INFORMATION

NOTES:

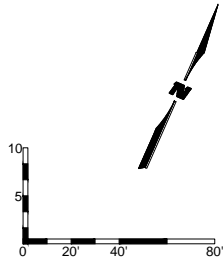
- PIPE LENGTHS ARE MEASURED TO HORIZONTAL DEFLECTION POINT OF BENDS AND TO INNER FACE OF MANHOLE OR INLET.
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MAIN LINE PROFILE STA 33+00 TO 37+00

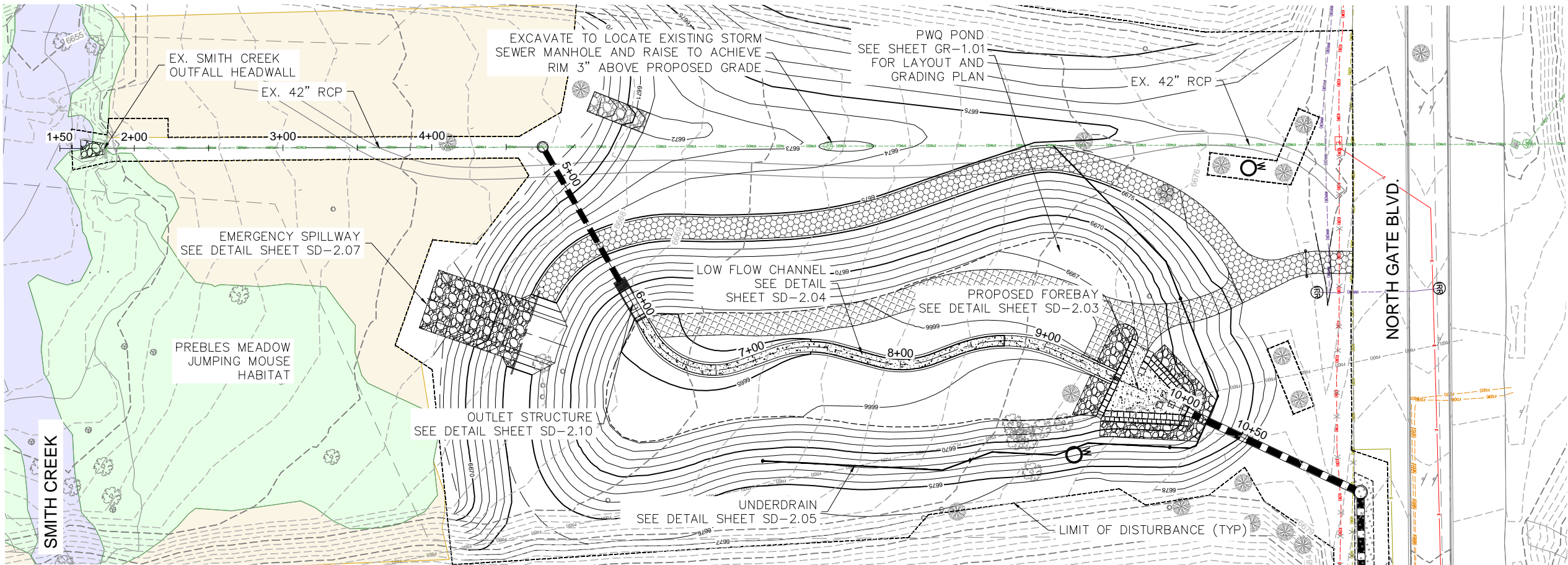


LATERAL-05 PROFILE



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File Name: 1.01 - 1.04 STM - PLAN & PROFILE.DWG			Date:	Comments	Init.			No Revisions:		STORM DRAIN PLAN AND PROFILE			CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:								Revised:	Designer:	NAB	Structure Numbers	Sheet Number 15 OF 58		
Unit Information Unit Leader									Detailer:	KDL				
									Void:	Sheet Subset:	STORM			

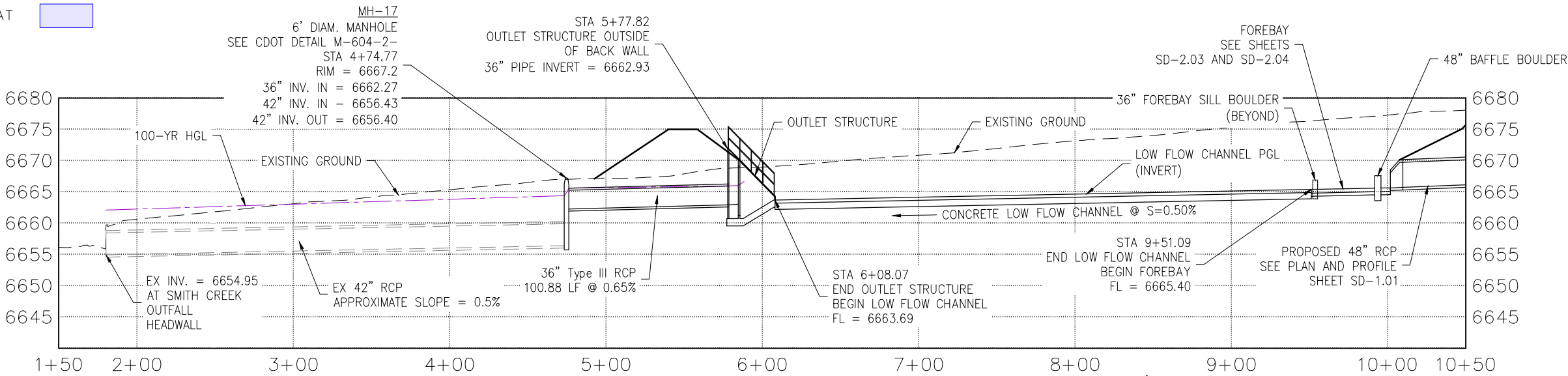
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OUTLET PLAN

LEGEND

- HIGH QUALITY PMJM HABITAT
- PMJM HABITAT UPLAND AREA
- OPEN WATERS IN PMJM HABITAT




OUTLET PROFILE




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File Name: 1.05 STM - POND & OUTLET.DWG
Horiz. Scale: Vert. Scale:
Unit Information Unit Leader

Sheet Revisions			
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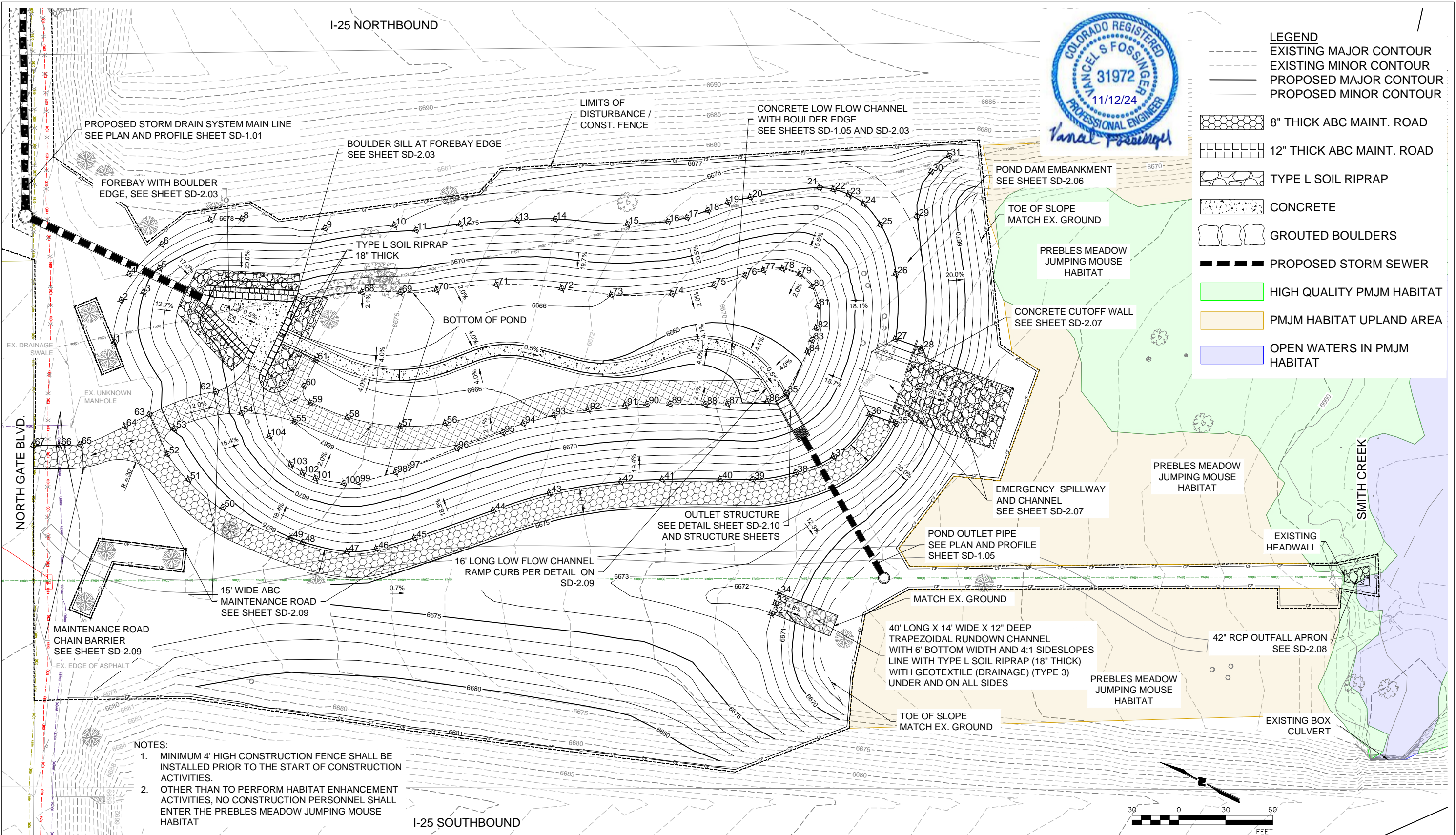
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No Revisions:	POND AND OUTLET PLAN AND PROFILE		CDOT Project No. C040-042 (21233)
Revised:	Designer: NAB	Structure Numbers	Sheet Number
Void:	Detailer: KDL	Subset Sheets: SD-1.05	16 OF 58
	Sheet Subset: STORM		

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Print Date: November 12, 2024		Sheet Revisions		As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT		Project No./Code	
File Name: 1.01 DTN-GRADING PLAN.DWG		Date:		No Revisions:		GRADING & LAYOUT PLAN		CDOT Project No. C040-042 (21233)	
Horiz. Scale:		Comments		Revised:		Designer: NAB		Sheet Number	
Unit Information		Init.		Void:		Detailer: KDL		17 OF 58	
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POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
1	TOP OF SLOPE	6677.00	435577.58	190504.15
2	TOP OF SLOPE	6677.00	435585.19	190530.28
3	TOP OF SLOPE	6675.00	435574.23	190540.99
4	TOP OF SLOPE	6678.00	435587.56	190547.69
5	TOP OF SLOPE	6675.00	435571.52	190559.29
6	TOP OF SLOPE	6678.00	435576.66	190573.75
7	TOP OF SLOPE	6678.00	435555.08	190601.11
8	TOP OF SLOPE	6678.00	435537.12	190610.28
9	TOP OF SLOPE	6677.00	435486.38	190627.16
10	TOP OF SLOPE	6676.00	435446.77	190647.73
11	TOP OF SLOPE	6675.00	435433.00	190650.76
12	TOP OF SLOPE	6675.00	435408.85	190666.14
13	TOP OF SLOPE	6675.00	435376.81	190683.85
14	TOP OF SLOPE	6675.00	435355.29	190694.83
15	TOP OF SLOPE	6675.00	435311.85	190711.40
16	TOP OF SLOPE	6675.00	435289.16	190723.85
17	TOP OF SLOPE	6675.00	435279.14	190731.36
18	TOP OF SLOPE	6675.00	435269.04	190741.16
19	TOP OF SLOPE	6675.00	435259.58	190751.03
20	TOP OF SLOPE	6675.00	435247.95	190760.21

POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
61	EDGE OF MAINTENANCE ROAD	6665.99	435455.92	190548.32
62	EDGE OF MAINTENANCE ROAD	6670.84	435505.43	190502.79
63	EDGE OF MAINTENANCE ROAD	6676.00	435537.91	190471.51
64	EDGE OF MAINTENANCE ROAD	6677.00	435548.91	190458.00
65	EDGE OF MAINTENANCE ROAD	6676.03	435570.08	190435.37
66	EDGE OF MAINTENANCE ROAD	6674.78	435581.58	190429.32
67	EDGE OF MAINTENANCE ROAD	6676.52	435596.93	190422.15
68	TOE OF SLOPE	6667.00	435447.44	190600.17
69	TOE OF SLOPE	6666.98	435425.34	190610.31
70	TOE OF SLOPE	6666.93	435404.85	190621.47
71	TOE OF SLOPE	6666.84	435371.43	190640.90
72	TOE OF SLOPE	6666.75	435332.67	190656.24
73	TOE OF SLOPE	6666.00	435302.22	190665.95
74	TOE OF SLOPE	6665.92	435267.32	190682.96
75	TOE OF SLOPE	6665.91	435245.10	190699.29
76	TOE OF SLOPE	6665.95	435229.74	190713.32
77	TOE OF SLOPE	6665.97	435220.51	190721.42
78	TOE OF SLOPE	6665.98	435209.87	190727.49
79	TOE OF SLOPE	6666.00	435198.54	190729.03
80	TOE OF SLOPE	6666.00	435187.89	190725.11

POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
21	TOP OF SLOPE	6675.00	435210.36	190784.47
22	TOP OF SLOPE	6675.00	435201.86	190787.21
23	TOP OF SLOPE	6674.99	435191.57	190788.34
24	TOP OF SLOPE	6675.00	435180.33	190787.05
25	TOP OF SLOPE	6675.00	435165.06	190779.38
26	TOP OF SLOPE	6675.00	435142.84	190755.02
27	TOP OF SLOPE	6675.00	435125.47	190717.11
28	TOP OF SLOPE	6675.00	435107.57	190718.96
29	TOP OF SLOPE	6675.00	435146.13	190794.09
30	TOP OF SLOPE	6675.00	435149.95	190823.99
31	TOP OF SLOPE	6675.00	435143.89	190838.02
32	TOP OF SLOPE	6672.00	435123.09	190524.31
33	TOP OF SLOPE	6671.00	435123.56	190531.29
34	TOP OF SLOPE	6672.00	435124.03	190538.28
35	TOP OF SLOPE	6675.00	435102.15	190668.25
36	TOP OF SLOPE	6675.00	435120.06	190666.40
37	TOP OF SLOPE	6675.00	435129.51	190632.30
38	TOP OF SLOPE	6675.00	435147.11	190612.82
39	TOP OF SLOPE	6675.00	435170.24	190597.23
40	TOP OF SLOPE	6675.00	435189.01	190588.56

POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
81	TOE OF SLOPE	6665.96	435179.48	190715.61
82	TOE OF SLOPE	6665.89	435174.28	190702.11
83	TOE OF SLOPE	6665.73	435173.60	190694.10
84	TOE OF SLOPE	6665.68	435172.91	190686.09
85	TOE OF SLOPE	6664.16	435174.25	190656.41
86	TOE OF SLOPE	6664.66	435182.70	190646.62
87	TOE OF SLOPE	6665.69	435205.22	190634.32
88	TOE OF SLOPE	6665.92	435218.06	190627.97
89	TOE OF SLOPE	6665.91	435238.55	190618.56
90	TOE OF SLOPE	6665.89	435251.91	190612.35
91	TOE OF SLOPE	6665.89	435264.06	190605.76
92	TOE OF SLOPE	6665.94	435284.45	190593.20
93	TOE OF SLOPE	6666.00	435302.99	190580.53
94	TOE OF SLOPE	6666.76	435318.41	190567.49
95	TOE OF SLOPE	6666.93	435327.83	190556.82
96	TOE OF SLOPE	6666.96	435350.35	190535.34
97	TOE OF SLOPE	6667.00	435373.18	190510.51
98	TOE OF SLOPE	6667.35	435379.32	190504.61
99	TOE OF SLOPE	6667.78	435398.30	190488.89
100	TOE OF SLOPE	6667.84	435406.42	190484.37

POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
41	TOP OF SLOPE	6675.00	435222.55	190572.64
42	TOP OF SLOPE	6675.00	435246.02	190560.20
43	TOP OF SLOPE	6674.99	435284.59	190534.28
44	TOP OF SLOPE	6675.00	435312.42	190509.03
45	TOP OF SLOPE	6675.00	435350.64	190471.70
46	TOP OF SLOPE	6675.00	435369.81	190455.12
47	TOP OF SLOPE	6675.00	435385.96	190445.43
48	TOP OF SLOPE	6675.00	435414.26	190439.00
49	TOP OF SLOPE	6675.00	435422.20	190438.19
50	TOP OF SLOPE	6675.53	435470.17	190437.77
51	TOP OF SLOPE	6676.01	435497.41	190444.43
52	TOP OF SLOPE	6676.02	435516.65	190453.40
53	EDGE OF MAINTENANCE ROAD	6674.70	435519.48	190470.38
54	EDGE OF MAINTENANCE ROAD	6669.00	435484.79	190497.23
55	EDGE OF MAINTENANCE ROAD	6666.99	435451.76	190506.56
56	EDGE OF MAINTENANCE ROAD	6666.50	435363.79	190546.53
57	EDGE OF MAINTENANCE ROAD	6666.43	435389.01	190532.63
58	EDGE OF MAINTENANCE ROAD	6666.50	435422.03	190523.51
59	EDGE OF MAINTENANCE ROAD	6666.59	435447.46	190521.96
60	EDGE OF MAINTENANCE ROAD	6666.43	435455.92	190529.94

POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
101	TOE OF SLOPE	6667.89	435424.05	190479.43
102	TOE OF SLOPE	6667.89	435433.20	190479.09
103	TOE OF SLOPE	6667.89	435442.25	190480.71
104	TOE OF SLOPE	6667.78	435462.25	190491.51



Print Date: November 12, 2024


File Name: 1.01 DTN-GRADING PLAN.DWG

Horiz. Scale: Vert. Scale:


Unit Information Unit Leader

Sheet Revisions

Date:	Comments	Init.



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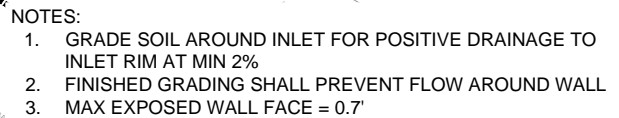
WILSON & COMPANY

5755 Mark Dabling Blvd.
Suite 100
Colorado Springs, CO 80919
Phone: 719-520-5800
FAX: 719-520-0108

As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT				Project No./Code	
No Revisions:		GRADING POINT TABLES				CDOT Project No. C040-042 (21233)	
Revised:	Designer:	NAB	Structure Numbers		Sheet Number	18 OF 58	
	Detailer:	KDL					
Void:		Sheet Subset: GRADING	Subset Sheets: GR-1.02				



- NOTES:
1. ALIGN INSIDE SURFACES OF PIPES @ THE JOINT
 2. COLLAR AND REINFORCEMENT IS TO BE CONTINUOUS AROUND PIPES
 3. REINFORCE WITH 5 - #5 BAR HOOPS AROUND PIPES AT 9" OC. HOOP BARS SHOULD HAVE MIN. 12" OVERLAP AT CLOSURE
 4. ATTACH #5 BARS PERPENDICULAR TO HOOP BARS @ 12" OC.

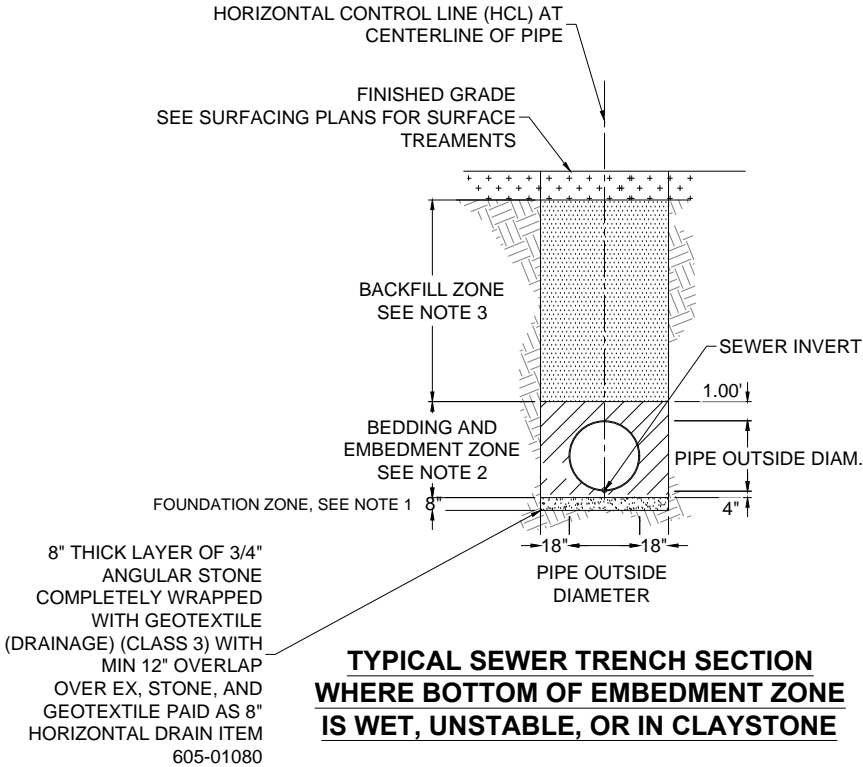


INLET IN-01A DRAINAGE CONTAINMENT WALL & PIPE COLLAR DETAILS

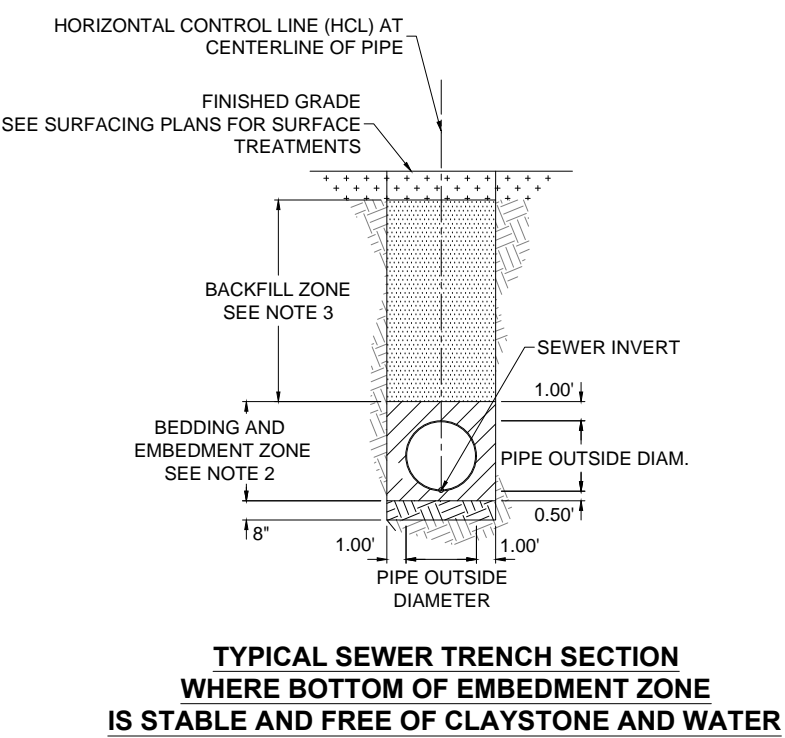
Print Date: November 12, 2024	<div><div><div></div><div></div><div></div><div></div><div></div></div><div><div>Sheet Revisions</div><table><tr><th>Date:</th><th>Comments</th><th>Init.</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table></div><div><div><div>811</div><div>Know what's below. Call before you dig.</div></div><div><div><div>EL PASO COUNTY, COLORADO</div><div><div></div><div>EST. 1961</div></div></div><div><div><div>WILSON & COMPANY</div><div>5755 Mark Dabbling Blvd. Suite 100 Colorado Springs, CO 80919 Phone: 719-520-5800 FAX: 719-520-0108</div></div></div></div></div></div>	Date:	Comments	Init.													As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT		Project No./Code	
Date:		Comments	Init.																			
File Name: 2.01 DTN-DETAILS NEW.DWG			No Revisions:	DETENTION DETAILS		CDOT Project No. C040-042 (21233)																
Horiz. Scale: Vert. Scale:			Revised:	Designer: NAB	Structure Numbers	Sheet Number																
Unit Information Unit Leader				Detailer: KDL																		
			Void:	Sheet Subset: DETAILS	Subset Sheets: SD 2.01	19 OF 58																

STORM SEWER TRENCH & BEDDING NOTES

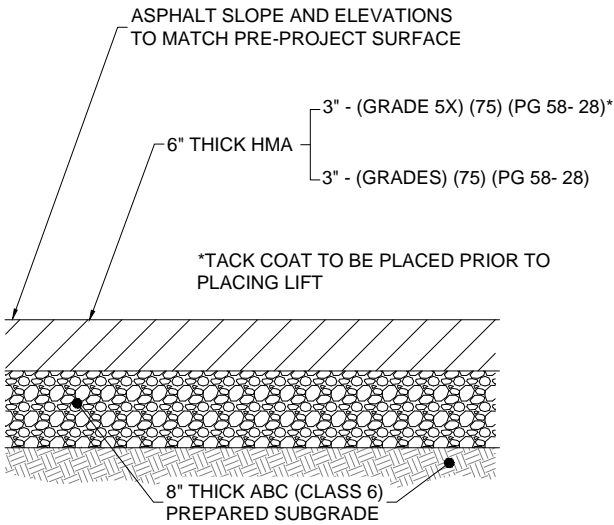
1. THE BOTTOM OF THE TRENCH SHALL BE FIRM, STABLE & UNIFORM. IF UNSTABLE SOIL OR CLAYSTONE IS PRESENT AT THE BOTTOM OF THE BEDDING & EMBEDMENT ZONE, OVER-EXCAVATION TO 12" BELOW THE BOTTOM OF THE PIPE (8" BELOW THE BEDDING AND EMBEDMENT ZONE) AND PLACEMENT OF AN 8" THICK LAYER OF ¾" ANGULAR STONE WRAPPED IN GEOTEXTILE (DRAINAGE) (CLASS 3) WITH 12" OVERLAP IN THE BOTTOM WILL BE REQUIRED. IN ORDER FOR THIS SPECIAL FOUNDATION ZONE TREATMENT TO BE PAID FOR, WRITTEN AUTHORIZATION BY THE COUNTY'S INSPECTOR MUST BE COMPLETED PRIOR TO ITS IMPLEMENTATION AND THE TREATMENT MUST BE COMPLETED TO THE SATISFACTION OF THE COUNTY'S INSPECTOR.
2. FILL MATERIAL USED IN THE BEDDING AND EMBEDMENT ZONE SHALL BE ONSITE OR IMPORTED GRANULAR SOILS CONFORMING TO AASHTO A-1, A-2-OR A-3 SOILS CLASSIFICATIONS. THE MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM STANDARD PROCTOR DENSITY PER ASTM D698 FOR COURSE GRAINED SOILS. THIS ZONE SHALL BE COMPACTED VIA HAND TAMPING.
3. ONSITE-SOILS (EXCLUDING CLAYSTONE, AND HIGHLY PLASTIC CLAYS) MAY BE USED IN THE BACKFILL ZONE. DRYING MAY BE REQUIRED TO ACHIEVE PROPER COMPACTION. THE MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 98% MAXIMUM STANDARD PROCTOR DENSITY PER ASTM D698 FOR COURSE GRAINED SOILS. IMPORTED SOILS CONFORMING TO THE STANDARDS FOR ENGINEERED FILL IN THE PROJECT GEOTECHNICAL ENGINEERING REPORT MAY ALSO BE UTILIZED IN THIS ZONE.



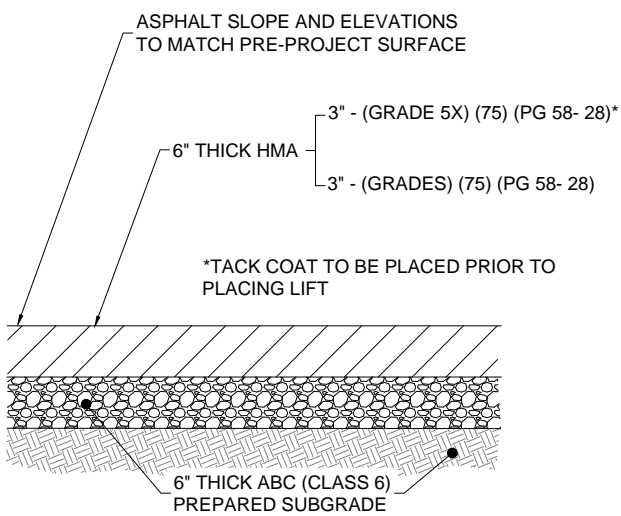
TYPICAL SEWER TRENCH SECTION
WHERE BOTTOM OF EMBEDMENT ZONE
IS WET, UNSTABLE, OR IN CLAYSTONE



TYPICAL SEWER TRENCH SECTION
WHERE BOTTOM OF EMBEDMENT ZONE
IS STABLE AND FREE OF CLAYSTONE AND WATER



TYPICAL ASPHALT PATCHING SECTION FOR
NORTHGATE BLVD.



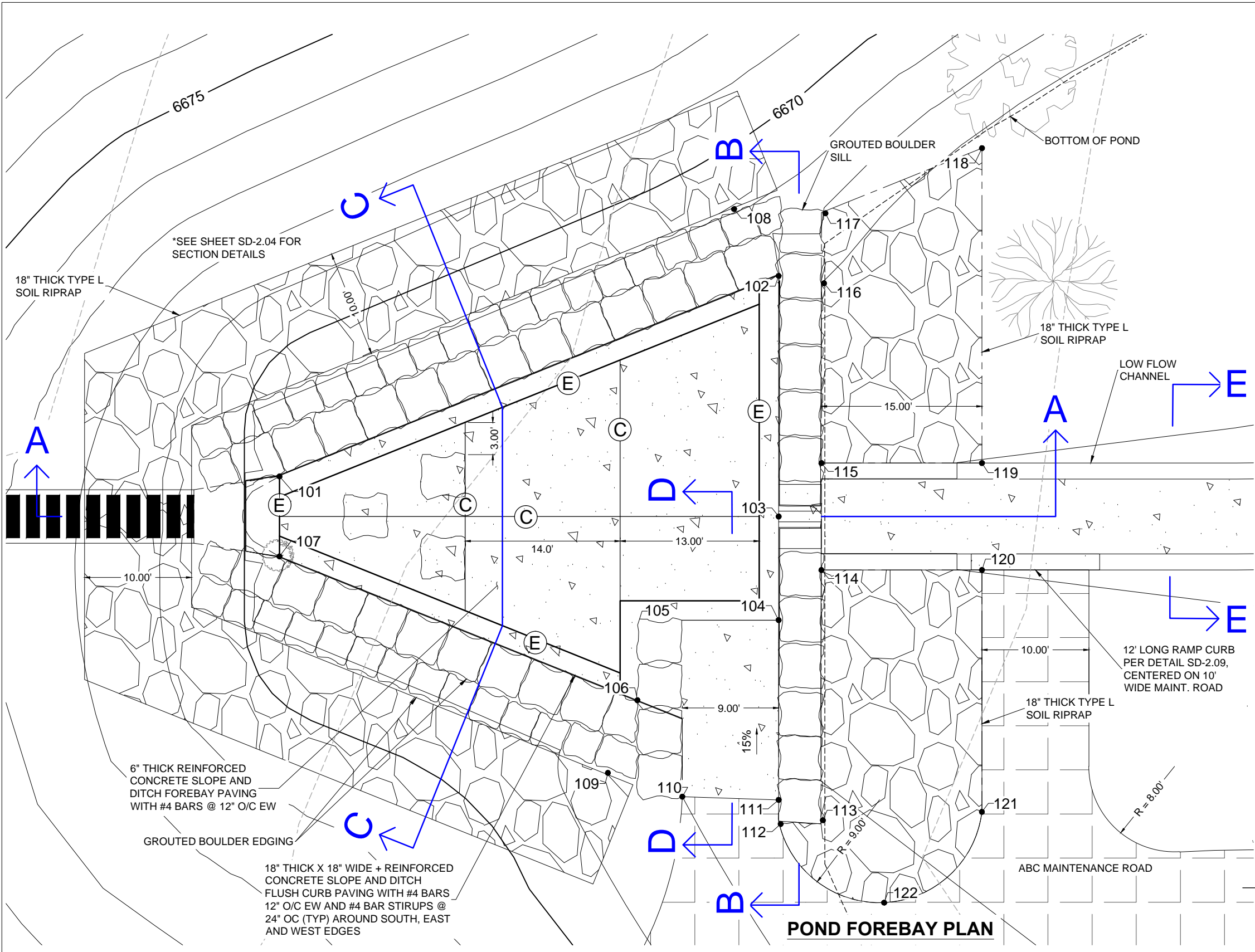
TYPICAL ASPHALT PATCHING SECTION FOR
STRUTHERS RD.

TRENCH & PAVEMENT DETAILS AND NOTES

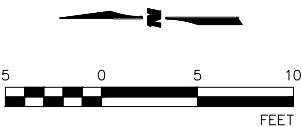
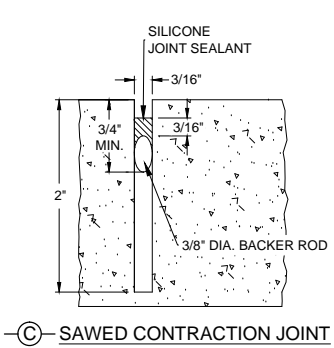


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File Name: 2.02 DTN-DETAILS NEW.DWG		Date:	Comments	Init.		No Revisions:		DRAINAGE DETAILS		CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:						Revised:		Designer: NAB	Structure Numbers	Sheet Number	
Unit Information Unit Leader						Void:		Detailer: KDL		20 OF 58	
								Sheet Subset: DETAILS	Subset Sheets: SD-2.02		

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POINT TABLE				
POINT #	DESCRIPTION	ELEVATION	NORTHING	EASTING
101	Invert Pavement Edge	6665.65	435531.57	190557.07
102	Invert Pavement Edge	6665.54	435484.92	190575.82
103	Invert Pavement Edge	6665.42	435484.92	190553.32
104	Invert Pavement Edge	6665.47	435484.92	190543.63
105	Invert Pavement Edge	6665.53	435497.91	190543.74
106	Invert Pavement Edge	6665.57	435498.12	190536.14
107	Invert Pavement Edge	6665.65	435531.57	190549.58
108	Ground/Riprap	6669.10	435489.08	190582.07
109	Ground/Riprap	6669.10	435500.87	190529.34
110	Concrete Ramp Corner	6668.00	435493.92	190527.12
111	Concrete Ramp Corner	6667.92	435484.92	190526.82
112	Edge of Maint. Road	6667.90	435484.73	190524.57
113	Riprap at Boulder Sill	6667.20	435480.78	190524.92
114	Riprap at Low Flow Chain	6666.10	435480.92	190548.32
115	Riprap at Low Flow Chain	6666.10	435480.92	190558.32
116	Riprap at Boulder Sill	6667.00	435480.68	190575.13
117	Riprap at Boulder Sill	6668.00	435480.54	190581.67
118	Riprap/Soil	6667.00	435465.92	190587.76
119	Riprap/Soil at Low Flow Channel	6666.00	435465.92	190558.32
120	Riprap/Soil at Low Flow Channel	6666.00	435465.92	190548.32
121	Riprap/Soil	6666.80	435465.93	190525.69
122	Riprap at Maint. Road	6667.40	435475.06	190517.21



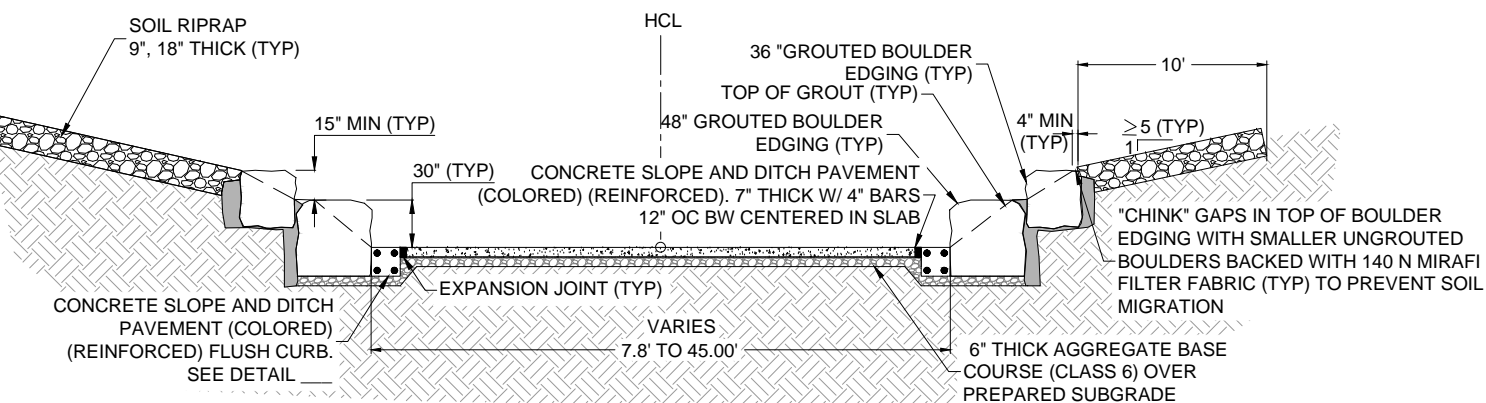
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Unit Information	Unit Leader

Sheet Revisions			
Date:	Comments	Init.	

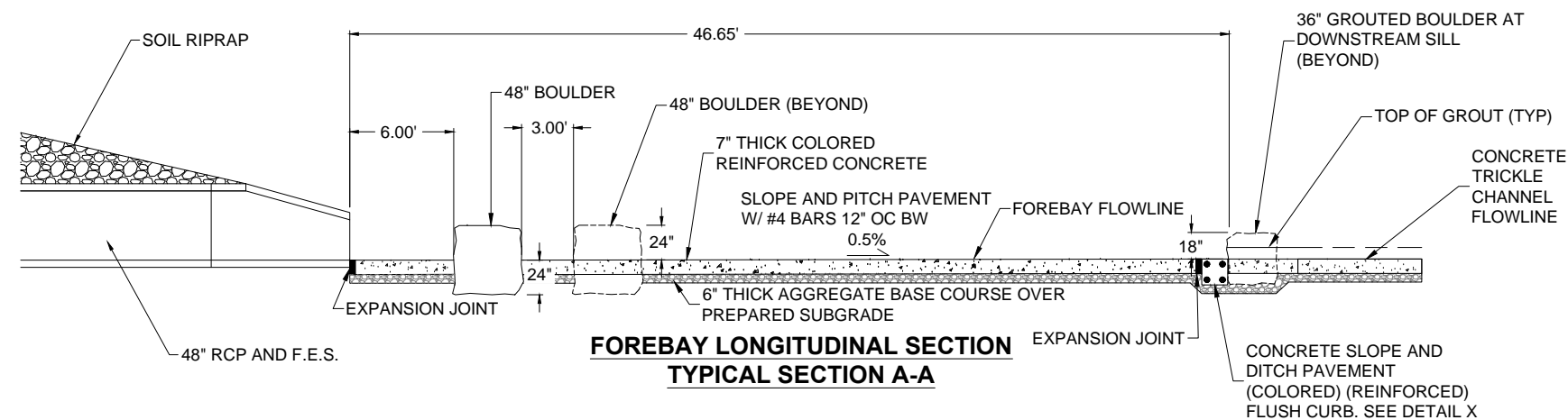
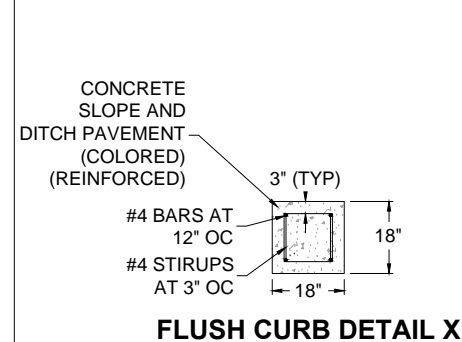
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Suite 100
Colorado Springs, CO 80919
Phone: 719-520-5800
FAX: 719-520-0108

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No Revisions:		DRAINAGE DETAILS		CDOT Project No. C040-042 (21233)	
Revised:		Designer: NAB	Structure Numbers	Sheet Number	
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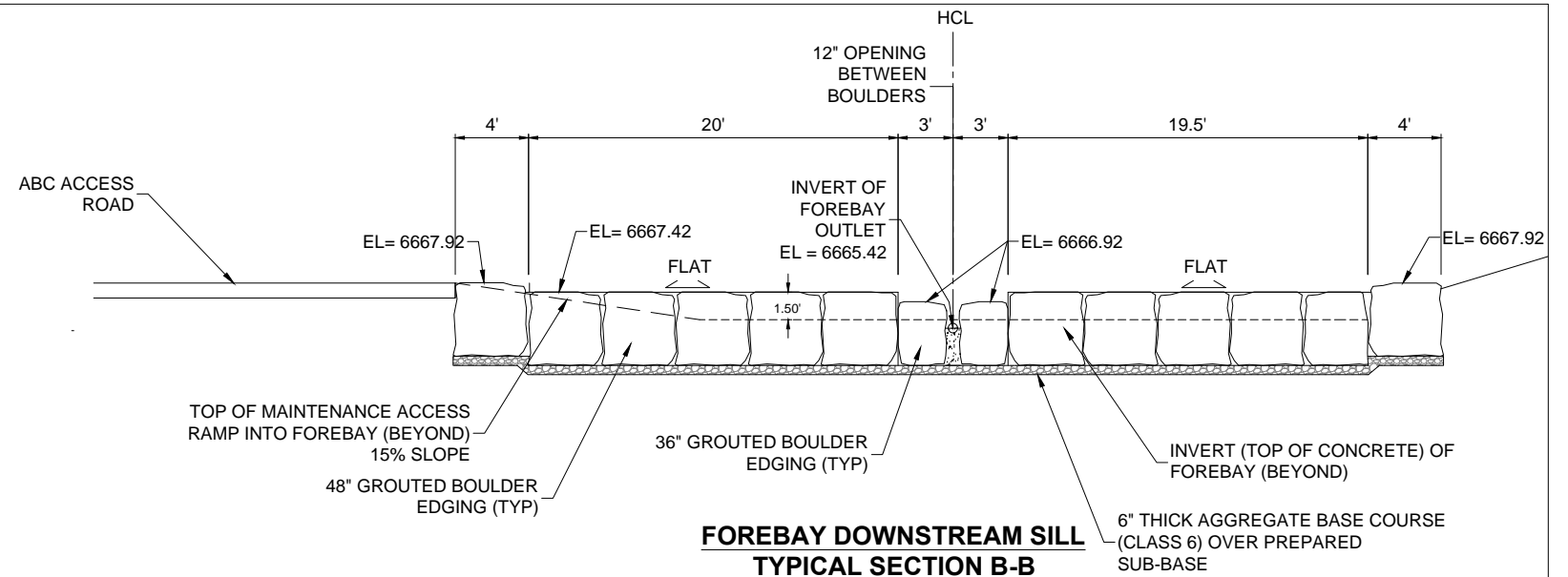
1. WHERE COLORED CONCRETE IS INDICATED, COLOR SHALL BE DAVIS COLORS OMAHA TAN 5084.
2. ALL EXPOSED GROUT SHALL BE COLORED WITH DAVIS COLORS OMAHA TAN 5084.
3. SMALLER ANGULAR STONE SHALL BE PLACED TO REDUCE GAPS BETWEEN STONES PRIOR TO PLACEMENT OF GROUT. TO THE EXTENT PRACTICAL, GROUT SHALL BE RECESSED BEHIND AND BELOW THE SURFACE OF BOULDERS.
4. A MINIMUM 4" WIDE STRIP OF BOULDER OR GROUT SHALL BE CONTINUOUS ALONG THE BACKS OF THE BOULDER EDGING AND CENTER OF THE FOREBAY SILL AT THE TOP OF EDGING OR SILL DESIGN ELEVATION.



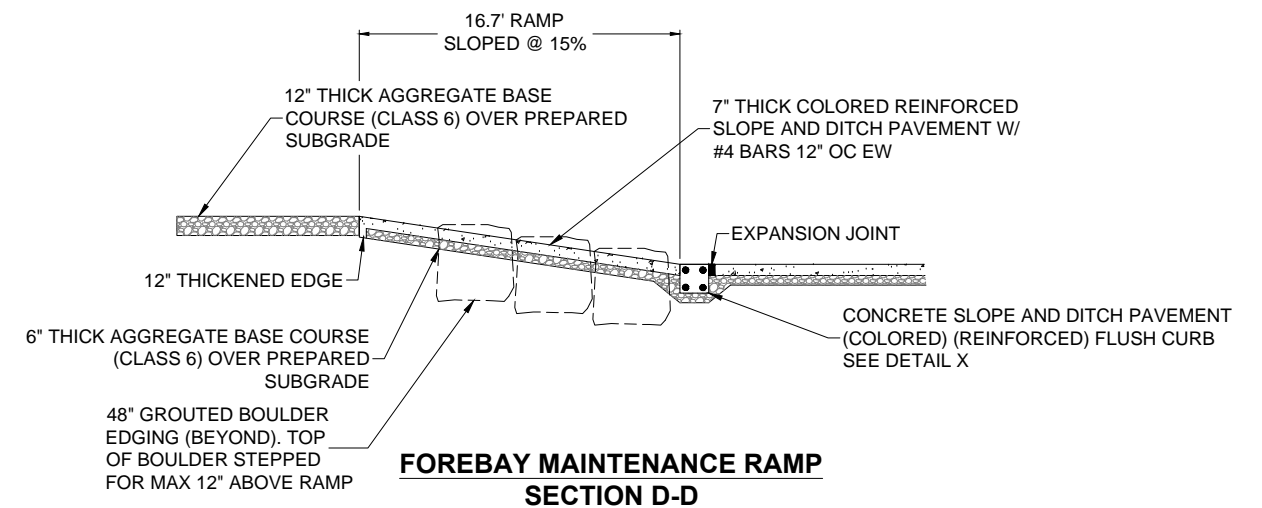
FOREBAY TRANSVERSE SECTION
TYPICAL SECTION C-C



FOREBAY LONGITUDINAL SECTION
TYPICAL SECTION A-A



FOREBAY DOWNSTREAM SILL
TYPICAL SECTION B-B

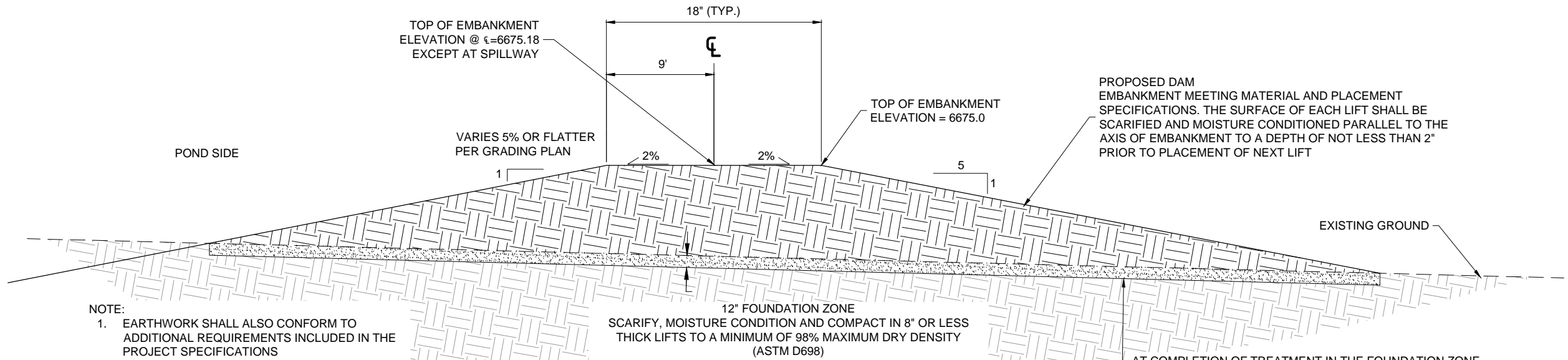


FOREBAY MAINTENANCE RAMP
SECTION D-D

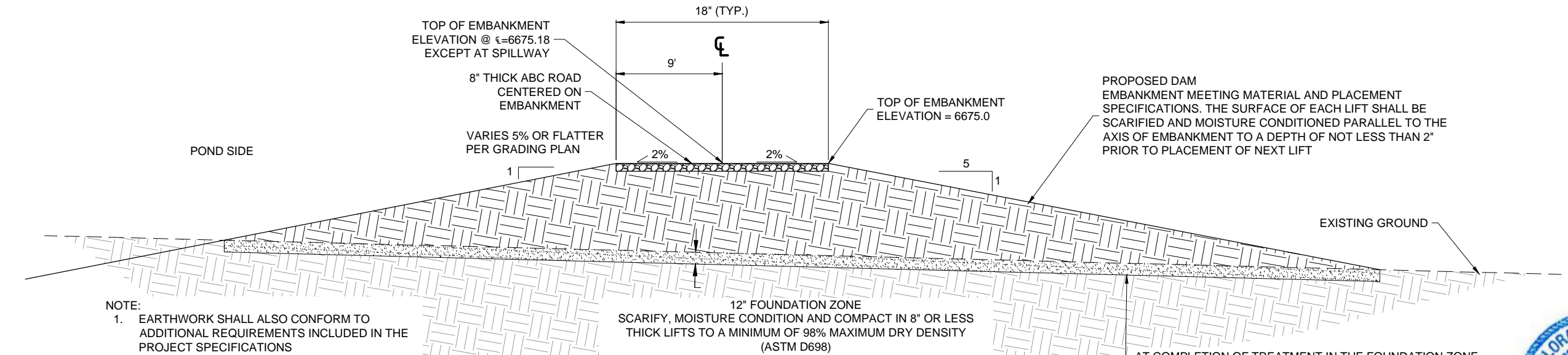
FOREBAY & LOW FLOW CHANNEL DETAILS

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Horiz. Scale: Vert. Scale:						Revised:		Designer: NAB	Structure Numbers		Sheet Number	
Unit Information Unit Leader								Detailer: KDL			22 OF 58	
						Void:		Sheet Subset: DETAILS	Subset Sheets: SD-2.04			







TYPICAL DAM EMBANKMENT SECTION

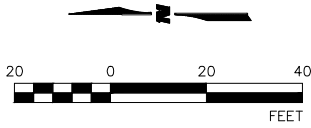
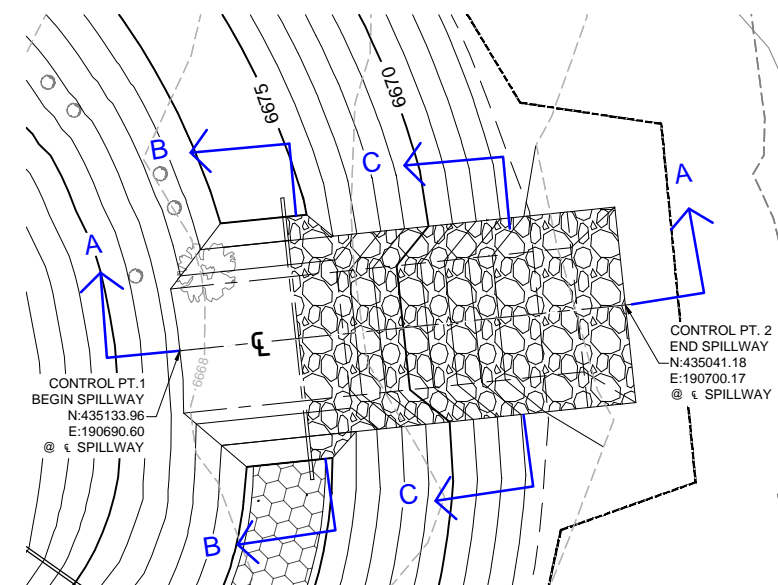
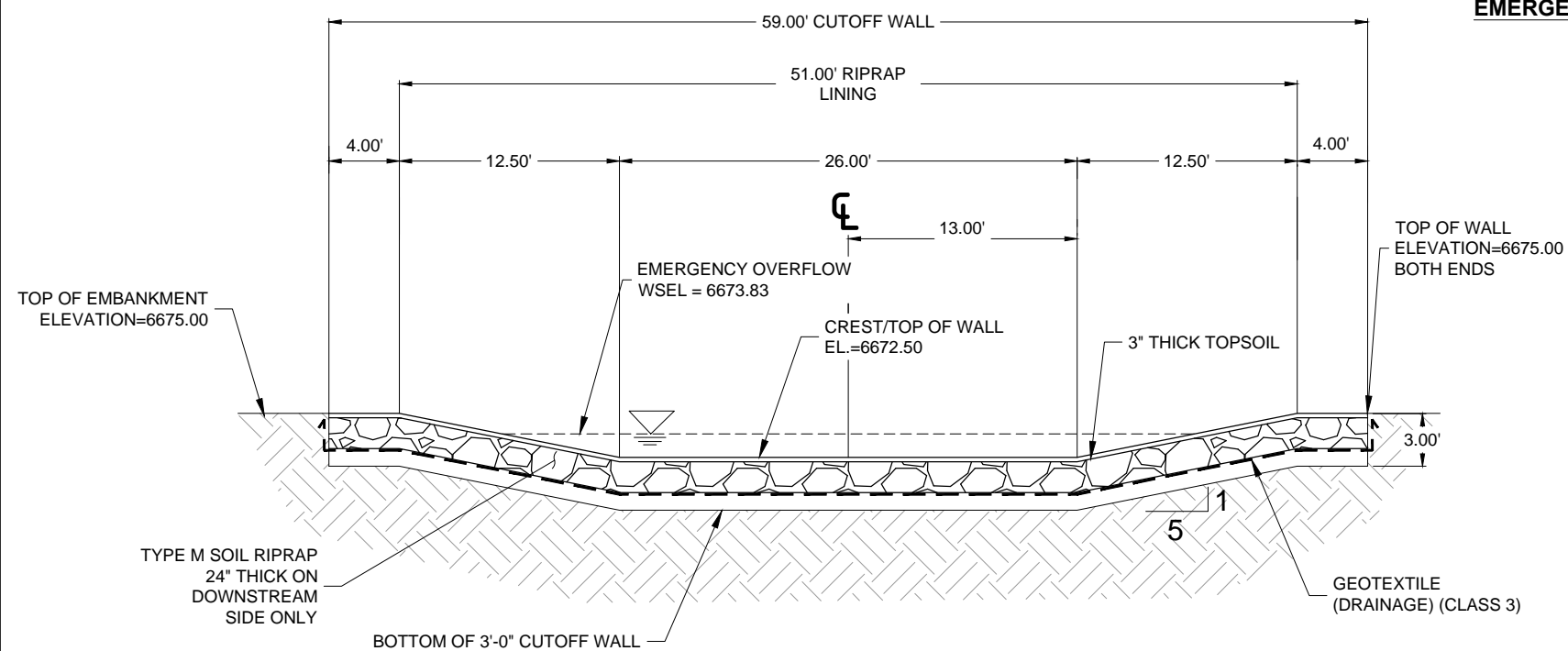
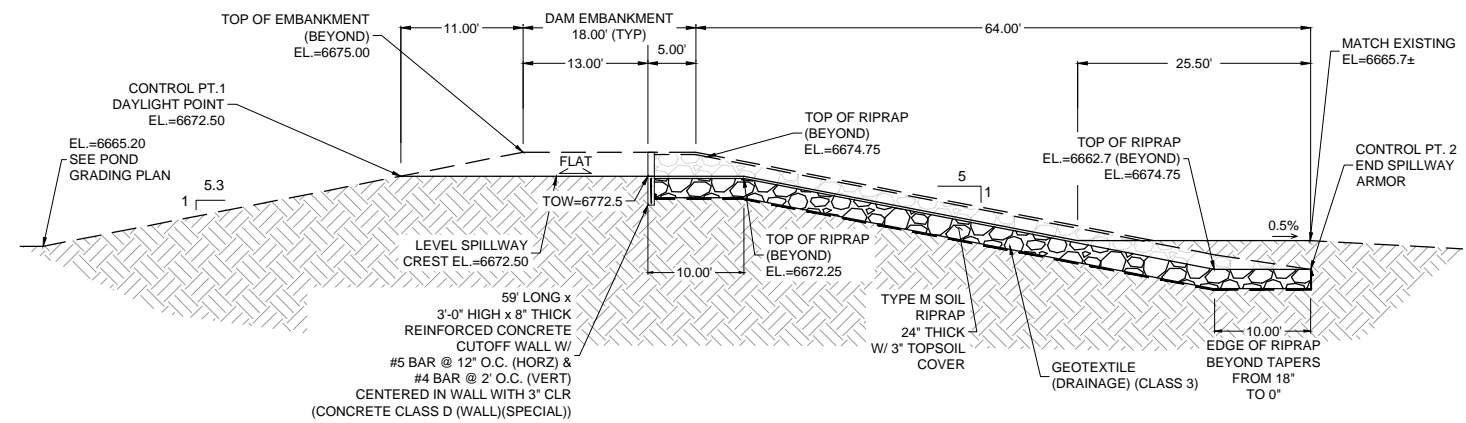
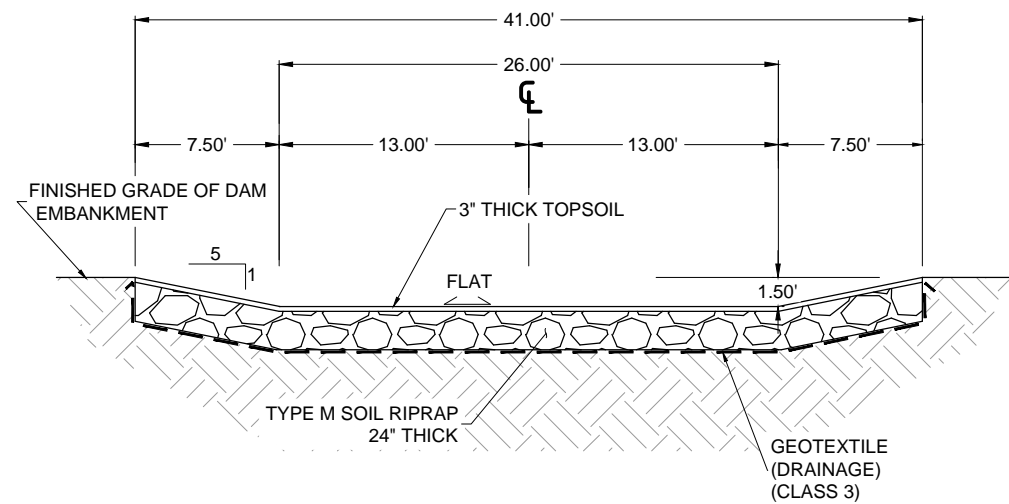


TYPICAL DAM EMBANKMENT SECTION WITH MAINTENANCE ROAD



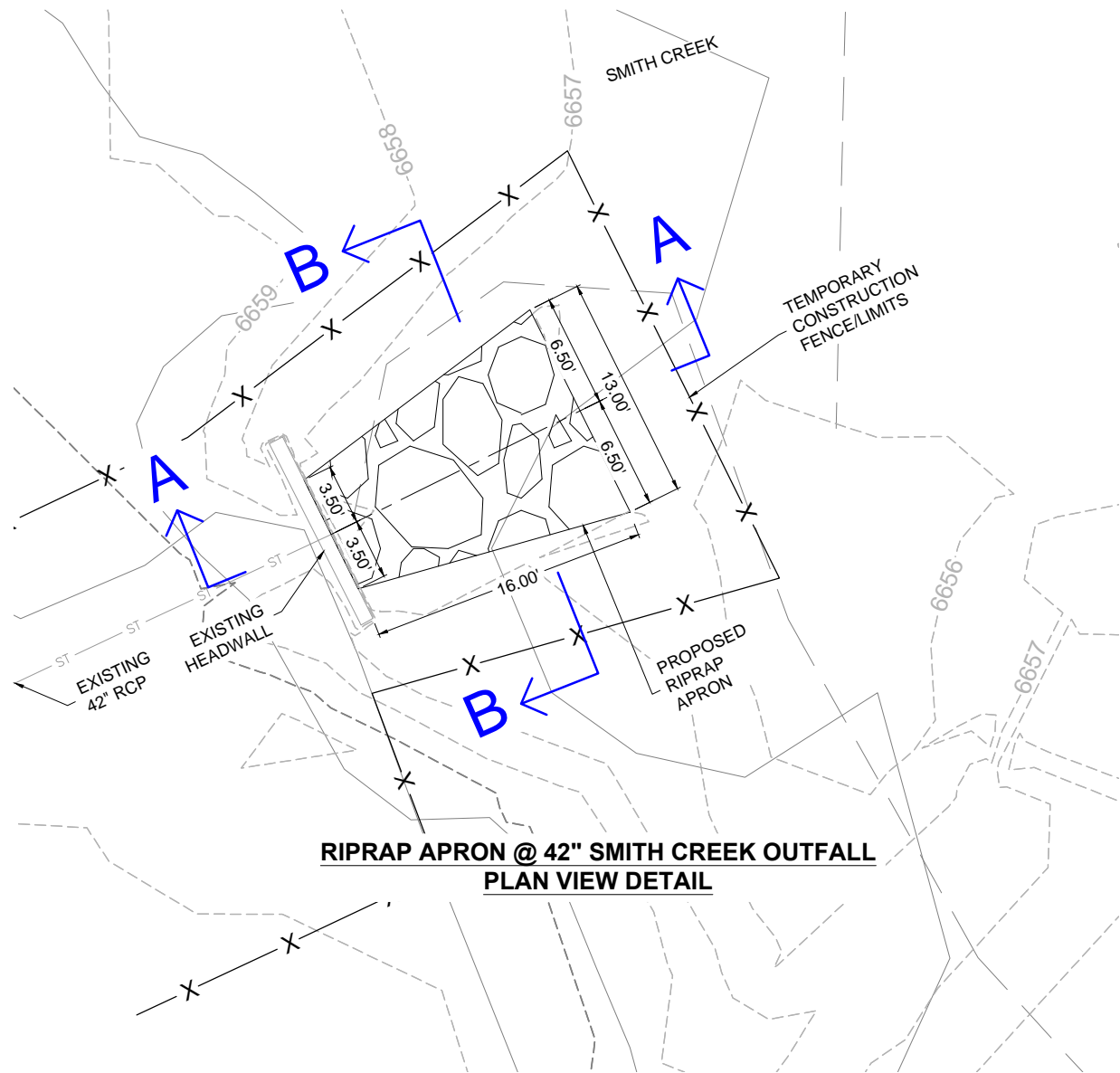
DAM EMBANKMENT SECTIONS

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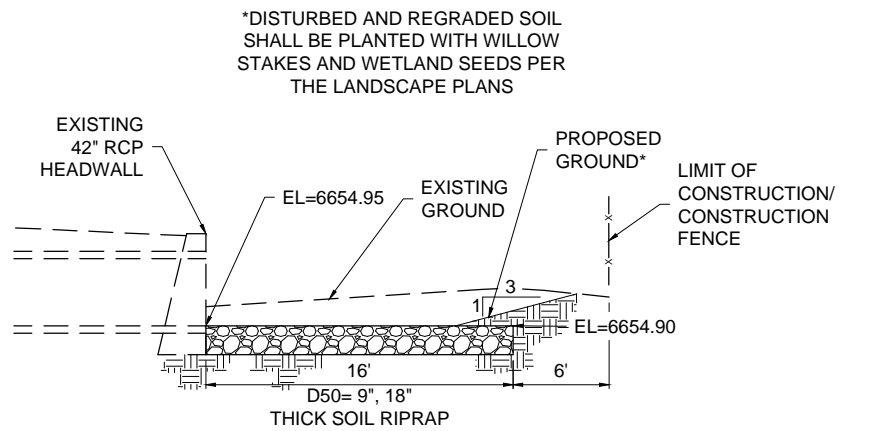


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Horiz. Scale: Vert. Scale:							Revised:		Designer: NAB		Structure Numbers		Sheet Number	
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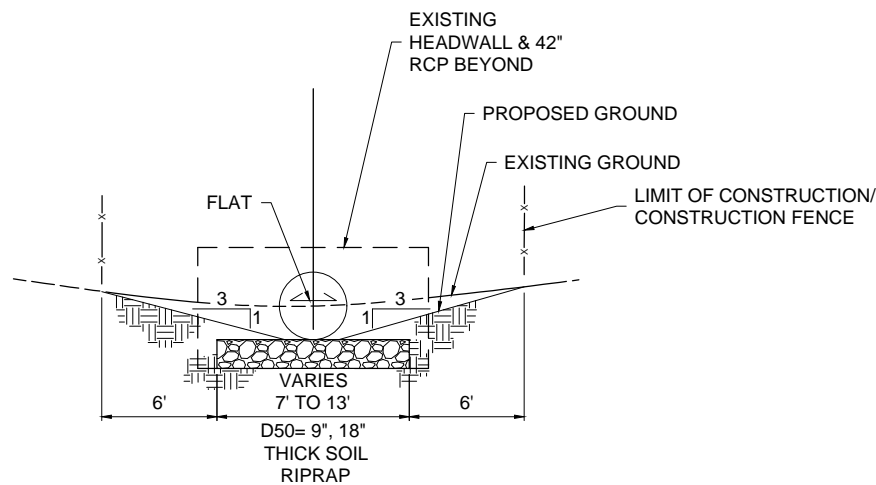
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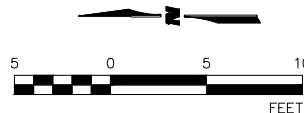
RIPRAP APRON @ 42" SMITH CREEK OUTFALL
PLAN VIEW DETAIL




RIPRAP APRON @ 42" SMITH CREEK OUTFALL
LONGITUDINAL SECTION A-A



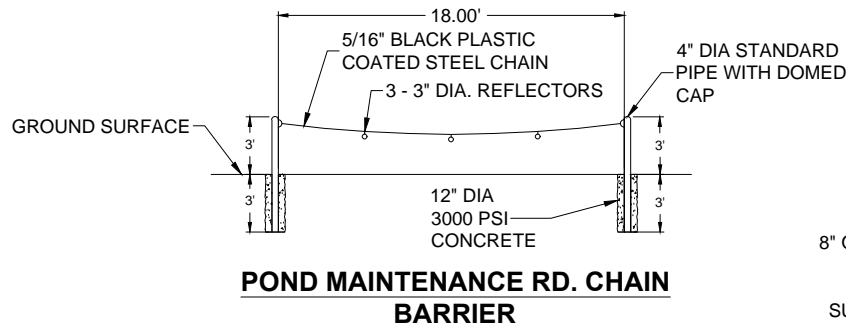
RIPRAP APRON @ 42" SMITH CREEK OUTFALL
TRANSVERSE SECTION B-B



RIPRAP APRON @ 42" OUTFALL TO SMITH CREEK

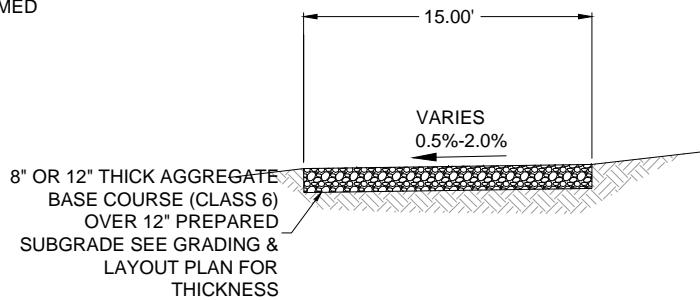
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Unit Information Unit Leader							Void:		Detailer: KDL		Numbers		
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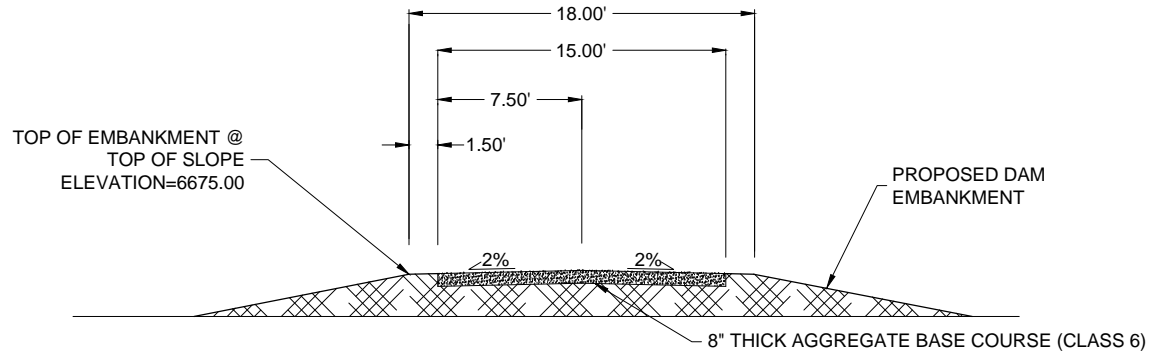
NOTES:

1. LOCATE 32' SOUTH OF THE SOUTH CURB LINE OF NORTH GATE BOULEVARD AND PERPENDICULAR TO MAINTENANCE ROAD.
2. PAINT STEEL PIPE AND LOOPS WITH 1 COAT OF PRIMER AND 2 COATS OF BLACK INDUSTRIAL ENAMEL PAINT



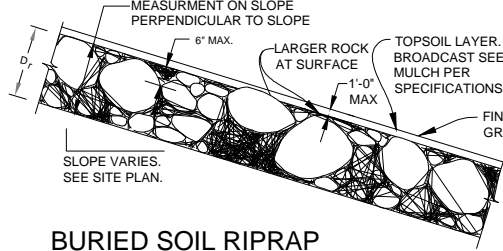
MAINTENANCE ROAD DETAIL
OUTSIDE OF DAM EMBANKMENT

NTS



MAINTENANCE ROAD ON DAM EMBANKMENT SECTION

NOTE:
SEE PLANS AND SECTIONS FOR RIPRAP THICKNESS GREATER AT LAYDOWN BANKS, TOES, AND OTHER LOCATIONS.



BURIED SOIL RIPRAP

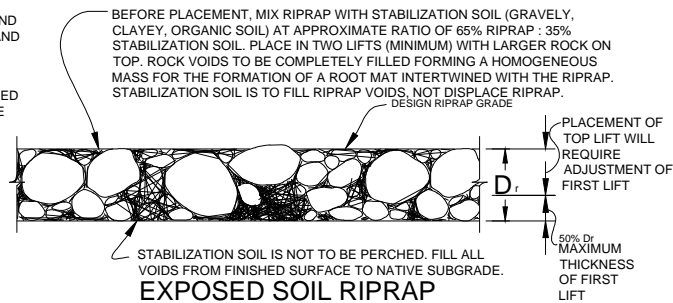
D_r = MINIMUM DEPTH OF RIPRAP LAYER. SEE TABLE BELOW (UNLESS NOTED OTHERWISE ON PLANS.)

USED THIS PROJECT	RIPRAP TYPE	D 50	D _r
	VL	6	11
	L	9	18
X	M	12	24
	H	18	32
	VH	24	42

ALL DIMENSIONS IN INCHES

NOTES:

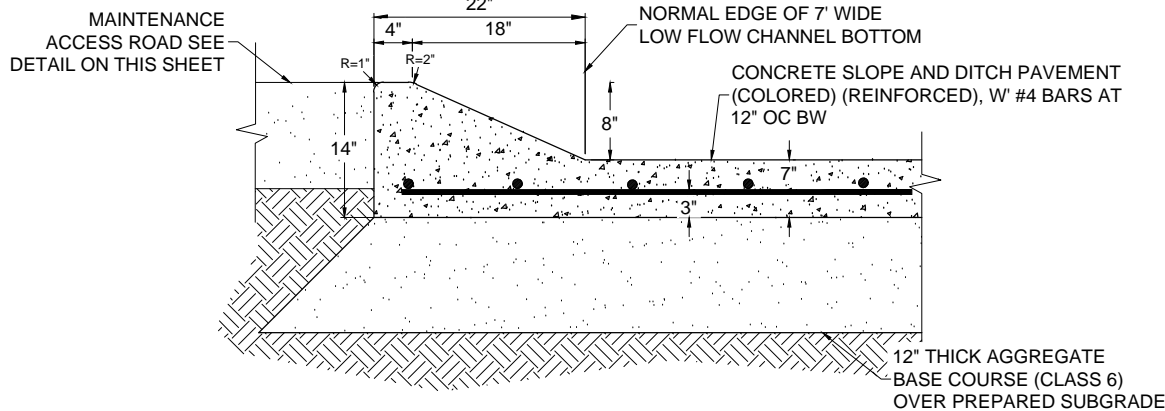
1. EXPOSED AND BURIED SOIL RIPRAP DETAILS ARE APPLICABLE TO FLAT OR SLOPED AREAS. REFER TO SITE PLAN FOR ACTUAL LOCATION AND LIMITS OF EACH TYPE.
2. REFER TO SPECIFICATIONS FOR MATERIALS AND PLACEMENT REQUIREMENTS FOR RIPRAP.
3. GENERAL PLACEMENT TECHNIQUES SHOULD RESULT IN LARGER ROCK AT THE SURFACE WITH ROCK SECURELY INTERLOCKED AT THE DESIGN THICKNESS AND GRADE. COMPACTION AND LEVELING SHOULD RESULT IN MINIMAL VOIDS AND PROJECTIONS ABOVE GRADE. TYPICAL FOR BOTH BURIED AND EXPOSED SOIL RIPRAP.
4. FOR BURIED SOIL RIPRAP: FINAL SOIL RIPRAP TO BE COMPACTED BY FULL LOADING OF BACK HOE BUCKET AS APPROVED. ANY SOFT, YIELDING OR POCKETS OF SMALL ROCK WILL BE REWORKED. PLACE TOPSOIL SO NO MORE THAN 4 INCHES THICK OVER SOIL RIPRAP. COORDINATE ROCK PLACEMENT TO PROVIDE TREE OR SHRUB PLANTING PITTS AS INDICATED ON PLANTING PLANS.



EXPOSED SOIL RIPRAP

TYPICAL SOIL RIPRAP PLACEMENT

NTS

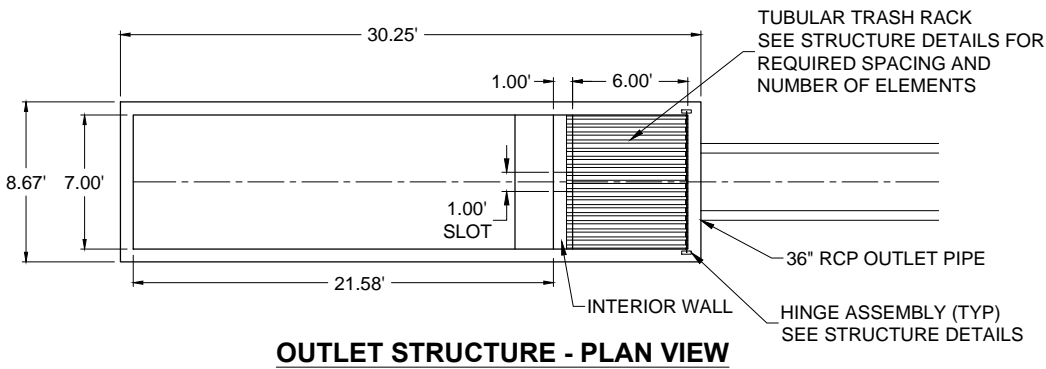


LOW FLOW CHANNEL RAMP CURB DETAIL

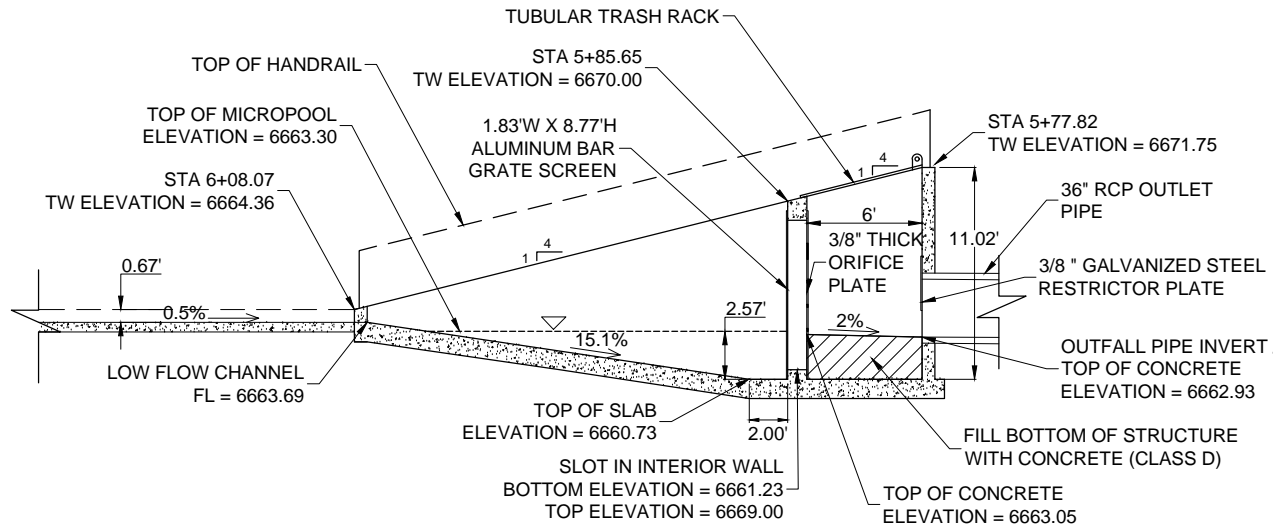
MAINTENANCE ROAD, SOIL RIPRAP, CHAIN BARRIER & L.F RAMP DETAILS

Print Date: MAY 21, 2021		<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			<div><div>811</div><div>Know what's below. Call before you dig.</div></div>	<div><div>EL PASO COUNTY, COLORADO</div><div>EST. 1861</div></div>	<div><div>WILSON & COMPANY</div><div>5755 Mark Dabbling Blvd. Suite 100 Colorado Springs, CO 80919 Phone: 719-520-5800 FAX: 719-520-0108</div></div>	As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT			Project No./Code	
File Name: 2.09 DTN-DETAILS2 NEW.DWG			Date:	Comments	Init.				No Revisions:		DRAINAGE DETAILS			CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:			<div></div>						Revised:	Designer: NAB	Structure Numbers		Sheet Number		
Unit Information Unit Leader			<div></div>						Void:	Detailer: KDL			27 OF 58		
			<div></div>						Sheet Subset: DETAILS		Subset Sheets: SD-2.09				

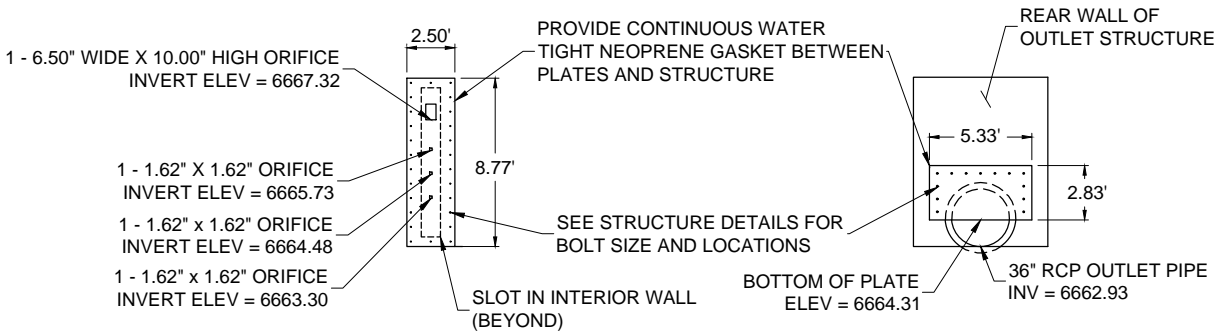




OUTLET STRUCTURE - PLAN VIEW

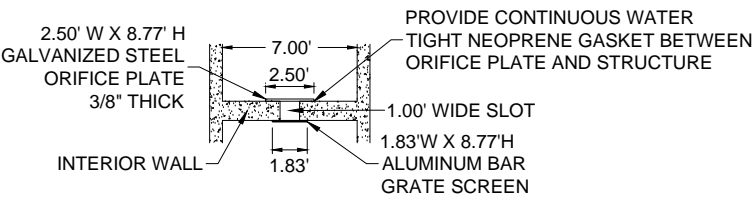


OUTLET STRUCTURE SECTION



ORIFICE PLATE

RESTRICTOR PLATE



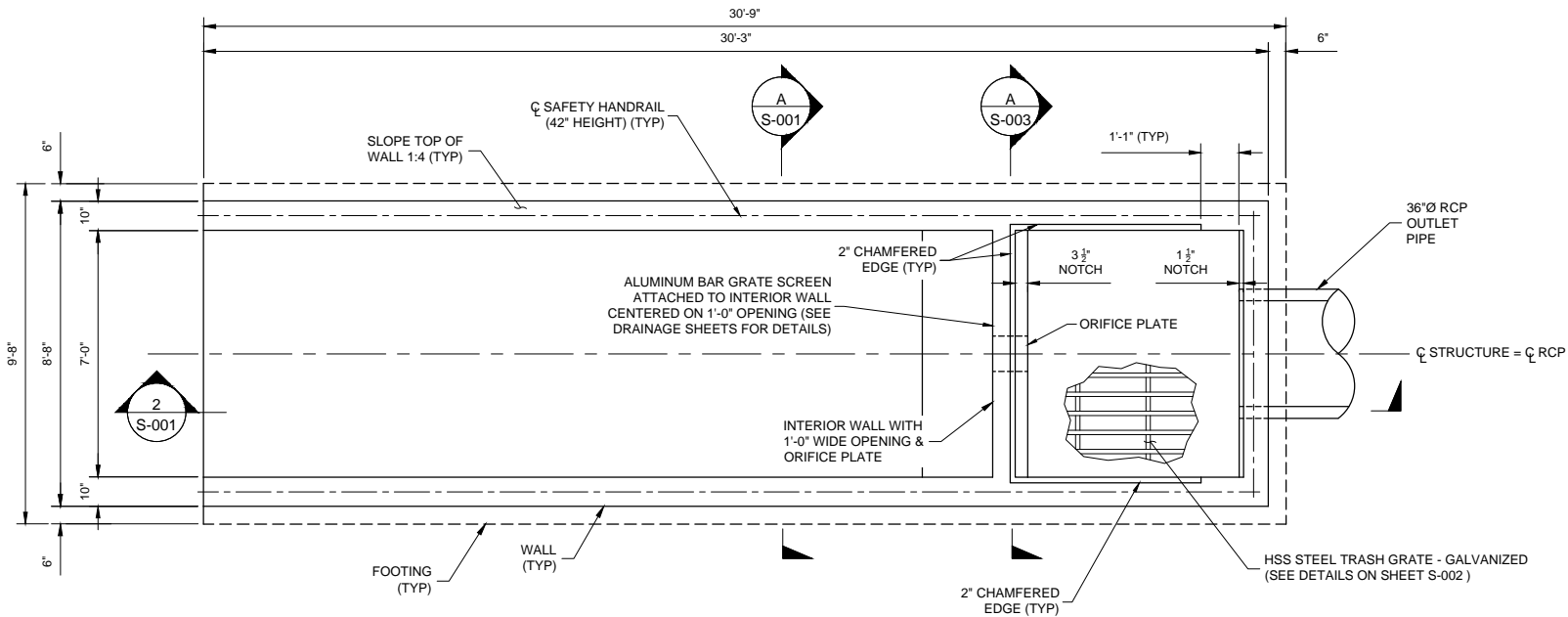
DETAIL AT SLOT IN INTERIOR WALL



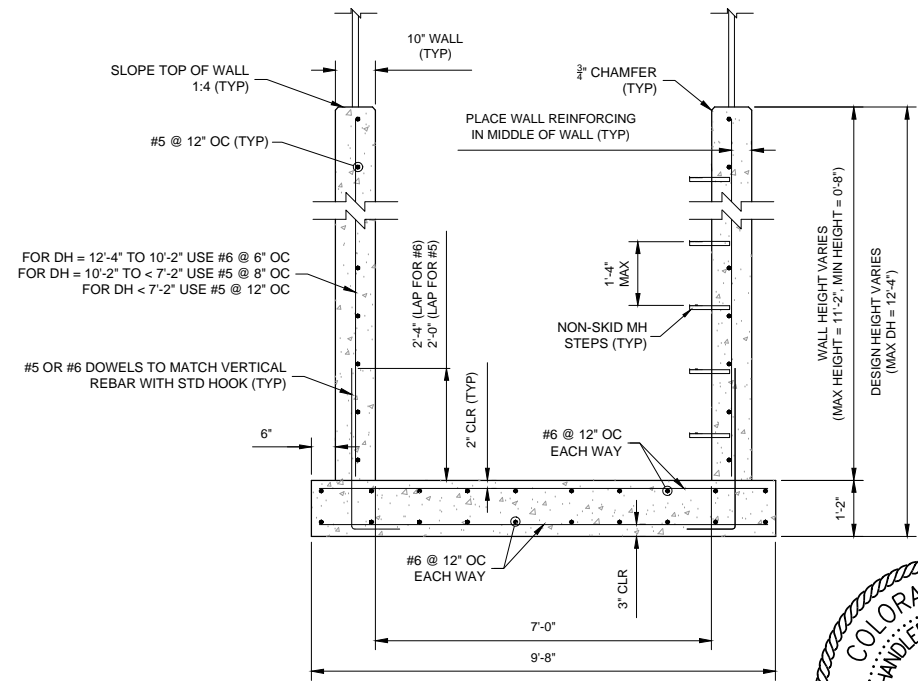
POND OUTLET STRUCTURE DRAINAGE DETAILS

Print Date: November 12, 2024	<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			<div><div>811</div><div>Know what's below. Call before you dig.</div></div> <div><div>EL PASO COUNTY, COLORADO</div><div>EST. 1861</div></div> <div><div>WILSON & COMPANY</div><div>5755 Mark Dabling Blvd. Suite 100 Colorado Springs, CO 80919 Phone: 719-520-5800 FAX: 719-520-0108</div></div>	As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT		Project No./Code	
File Name: 2.10 DTN-DETAILS NEW.DWG		Date:	Comments	Init.		No Revisions:		DRAINAGE DETAILS		CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:						Revised:	Designer: NAB	Structure Numbers		Sheet Number	
Unit Information Unit Leader						Void:	Detailer: KDL			28 OF 58	
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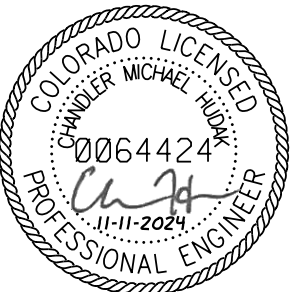
11/12/2024 C:\users\mgorater?appdata?local?bentley\projectwise\wci_projects\40718526\Northgate WQ Pond Structure.dwg



1 PLAN - POND OUTLET STRUCTURE
SCALE: 3/16" = 1'-0"

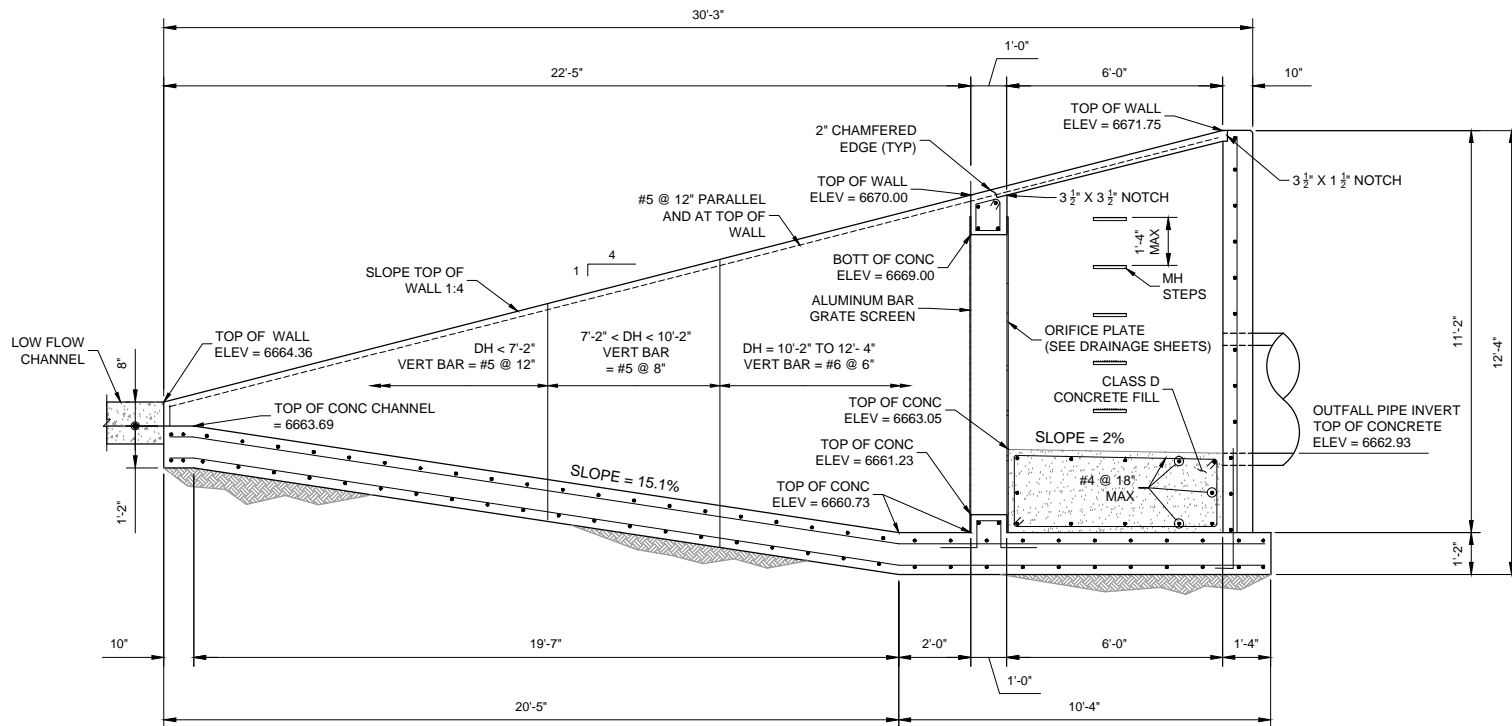


A TYPICAL SECTION
SCALE: 1/4" = 1'-0"



STRUCTURAL GENERAL NOTES:

- EXCAVATE SOIL BENEATH THE STRUCTURE FOUNDATION TO A MINIMUM DEPTH OF 2-FEET BELOW THE BOTTOM OF THE FOOTING. THE 2-FOOT DEPTH SHALL EXTEND 1.5-FEET BEYOND THE FOOTING LIMITS REPRESENTED IN PLAN VIEW. REPLACE EXCAVATION WITH APPROVED STRUCTURAL BACKFILL ACCORDING TO THE PROJECT GEOTECHNICAL REPORT.
- NATIVE MATERIAL MAY BE USED FOR STRUCTURE BACKFILL. NATIVE MATERIAL SHALL COMPLY AND BE CLASSIFIED PER USCS AND AASHTO CLASSIFICATIONS AS "SM", "SP", "SW-SM," AND "A1" THROUGH "A-3". NATIVE MATERIAL EXCAVATED 2-FEET BELOW THE FOUNDATION SHALL BE REWORKED AND DESIGNATED AS ENGINEERED FILL. PLASTIC CLAY SOILS ARE NOT TO BE USED AS ENGINEERED FILL. CLAYSTONE BEDROCK IS ALSO NOT SUITABLE TO BE USED AS ENGINEERED FILL. ENGINEERED FILL MATERIAL SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY, COMPACTED WITHIN THREE PERCENT (3%) OF OPTIMUM WATER CONTENT, AND MUST COMPLY WITH ALL OTHER PARAMETERS SET FORTH IN THE NORTH GATE / STRUTHERS PWQ POND & STORM SEWER GEOTECHNICAL ENGINEERING REPORT BY TERRACON, DATED AUGUST 2, 2024.
- IMPORTED MATERIAL USED FOR ENGINEERED FILL SHALL COMPLY WITH THE GRADATION AND SOIL PROPERTIES SPECIFIED IN THE GEOTECHNICAL ENGINEERING REPORT BY TERRACON. THE GRADATION AND SOIL PROPERTIES ARE SPECIFIED IN TABLES PROVIDED FOR IMPORTED ENGINEERED FILL IN THE MATERIAL TYPES SECTION.
- THE CONTRACTOR SHALL ADEQUATELY SHORE STRUCTURE EXCAVATIONS ACCORDING TO OSHA REQUIREMENTS AND AS NECESSARY THROUGHOUT ALL CONSTRUCTION ACTIVITIES RELATED TO THE DESIGN PLANS. SHORING AT A MINIMUM SHALL COMPLY WITH ALL APPLICABLE OSHA SHORING STANDARDS AND OSHA REGULATIONS, INCLUDING BUT NOT LIMITED TO 29CFR PART 1926, SUBPART P - EXCAVATIONS, TRENCHING, AND SHORING.
- STRUCTURE EXCAVATION SHALL BE PER CDOT STANDARD SPECIFICATION 206 "EXCAVATION AND BACKFILL FOR STRUCTURES". STRUCTURE BACKFILL SHALL CONSIST OF FURNISHING, PLACING AND COMPACTING BACKFILL MATERIAL 1.5-FEET AROUND AND 2-FEET BENEATH STRUCTURES TO THE LINES DESIGNATED ON THE PLANS AND SPECIFIED OR DIRECTED BY THE ENGINEER.
- UNSUITABLE MATERIAL IS CLASSIFIED AS SATURATED NATIVE MATERIAL AND AS MATERIAL CONTAINING ORGANIC MATTER OR DEBRIS. UNSUITABLE MATERIAL ENCOUNTERED DURING STRUCTURE EXCAVATION SHALL BE REMOVED TO A DEPTH OF 3 FEET BELOW THE BOTTOM OF THE FOOTING. IF UNSUITABLE MATERIAL EXIST 3-FEET BELOW THE BOTTOM OF THE FOOTING THE ENGINEER SHALL BE CONTACTED FOR DIRECTION.
- 6-INCHES OF PERVIOUS AGGREGATE BASE COURSE SHALL BE PLACED IMMEDIATELY BELOW THE STRUCTURE FOOTING. AGGREGATE BASE COURSE MATERIAL SHALL CONFORM TO CDOT SUBSECTION 703.07 AND GRADATION REQUIREMENTS OF TABLE 703-11. PERVIOUS BACKFILL MATERIAL MAY CONSIST OF CRUSHED ROCK, CRUSHED GRAVEL, OR A COMBINATION OF THE TWO.
- ENGINEERED BACKFILL MATERIAL USED WITHIN THE UPPER 2 FEET OF THE STRUCTURE SHALL BE FREE OF ROCKS AND HAVE A PARTICLE DIAMETER LESS THAN 6-INCHES.
- BACKFILL SHALL NOT BE PLACED FOR THE OUTLET STRUCTURE UNTIL THE CONCRETE WALL CONCRETE HAS REACHED 100% OF THE MINIMUM 28 DAY CONCRETE COMPRESSIVE STRENGTH (f_c) SPECIFIED.
- CONCRETE SHALL BE CDOT CLASS D WITH THE MINIMUM 28-DAY COMPRESSIVE STRENGTH (f_c) OF 4500 PSI. CEMENT AND CONCRETE MATERIAL PROPERTIES SHALL COMPLY WITH CDOT CLASS D PARAMETERS. ALL CONCRETE WORK SHALL CONFORM TO CDOT STANDARD SPECIFICATIONS FOR CONCRETE WORK.
- STEEL REINFORCING SHALL COMPLY WITH ASTM A615, GRADE 60. REINFORCING SHALL BE BLACK DEFORMED BILLET BARS (UNCOATED).
- ALL STEEL AND STEEL CONNECTING ELEMENTS SHALL BE GALVANIZED ACCORDING TO ASTM A123, (AASHTO M111) UNLESS NOTED OTHERWISE.
- MH STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FEET - 6 INCHES AND SHALL CONFORM TO AASHTO M199.



2 ELEVATION - POND OUTLET STRUCTURE
SCALE: 3/16" = 1'-0"

Print Date: November 12, 2024
File Name: NORTHGATE WQ POND STRUCTURE.DWG
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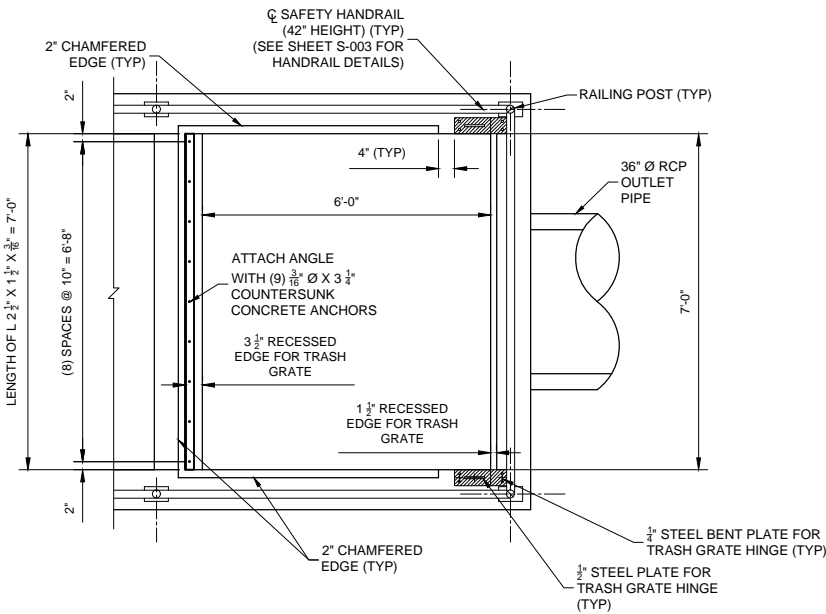
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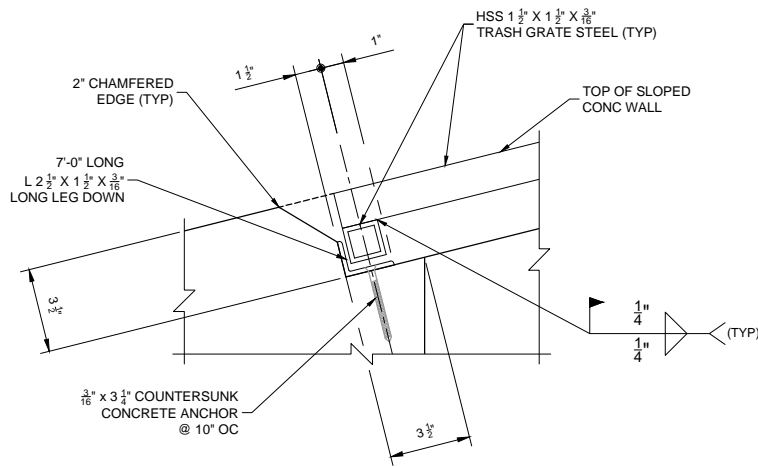
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No Revisions:		STRUCTURE DETAILS			CDOT Project No. C040-042 (21233)	
Revised:	Designer:	NAB	Structure Numbers		Sheet Number	
					29 OF 58	
Void:	Detailer:	KDL	Subset Sheets:	ST-2.01		

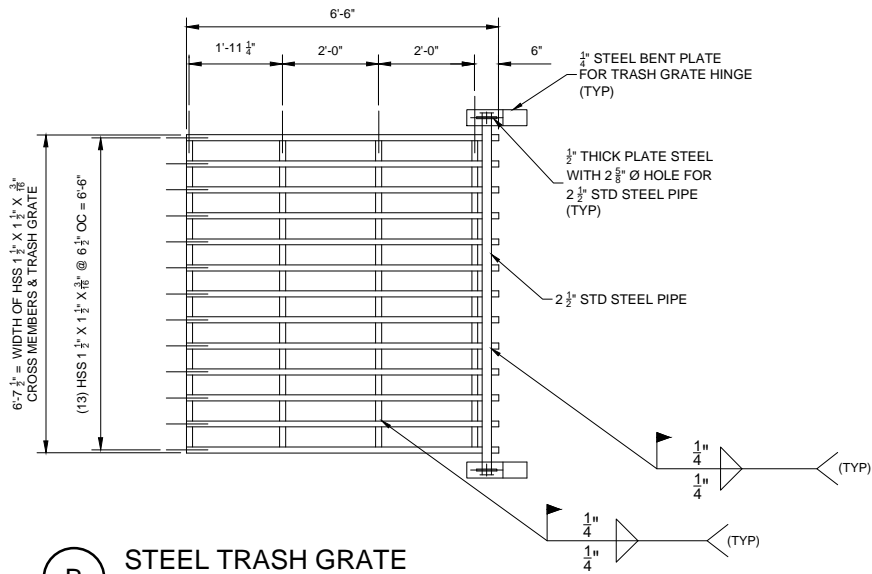
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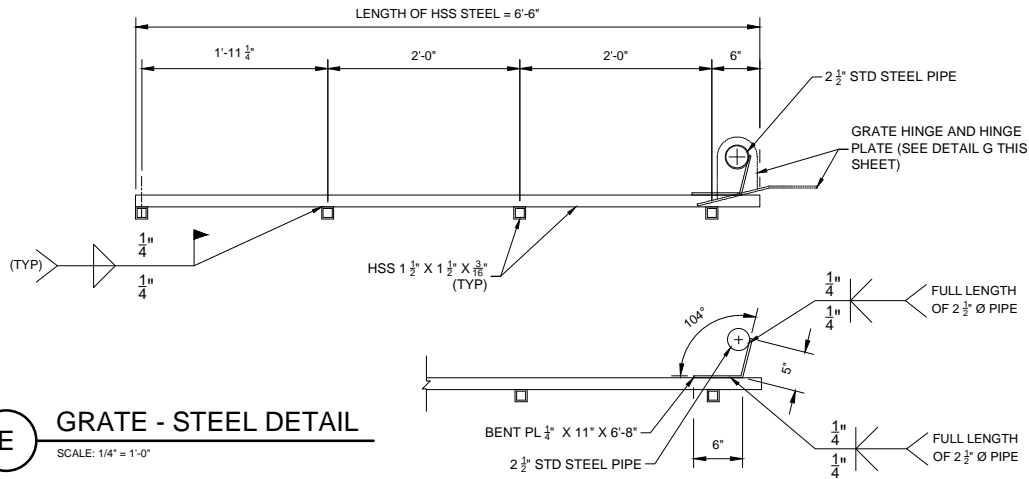
A PLAN - TRASH GRATE INLET
SCALE: 1/4" = 1'-0"



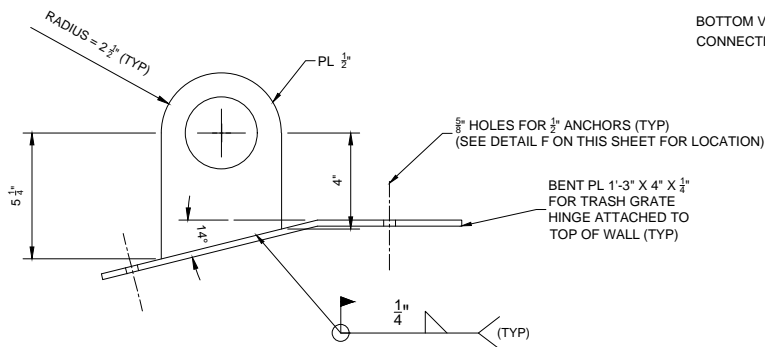
D TRASH GRATE CONNECTION
SCALE: 1 1/2" = 1'-0"



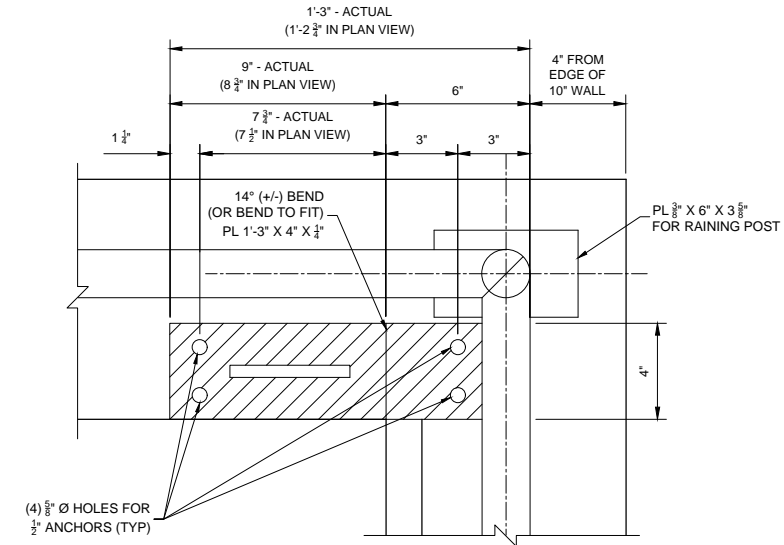
B STEEL TRASH GRATE
SCALE: 1/4" = 1'-0"



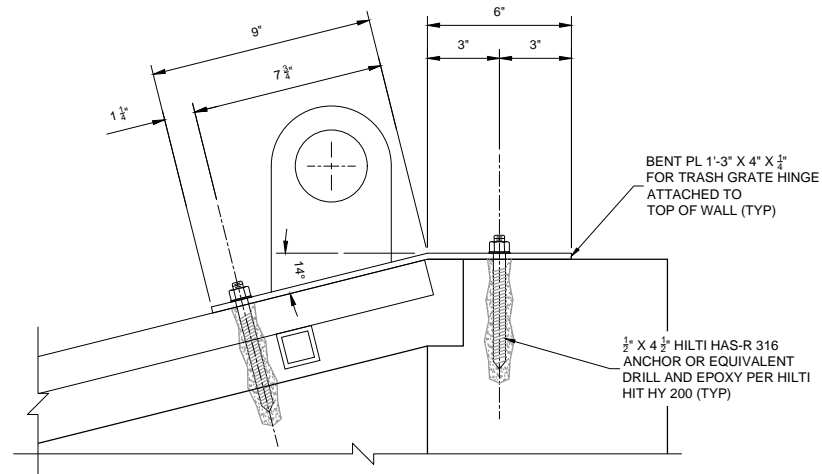
E GRATE - STEEL DETAIL
SCALE: 1/4" = 1'-0"



G GRATE HINGE DETAIL
SCALE: 1 1/2" = 1'-0"



C PLAN - HINGE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



F HINGE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"

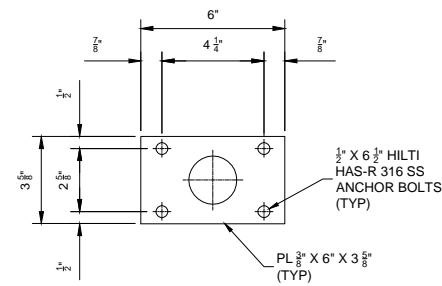
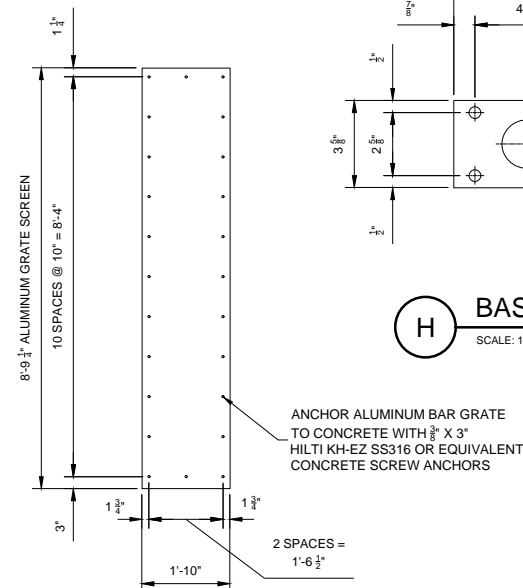
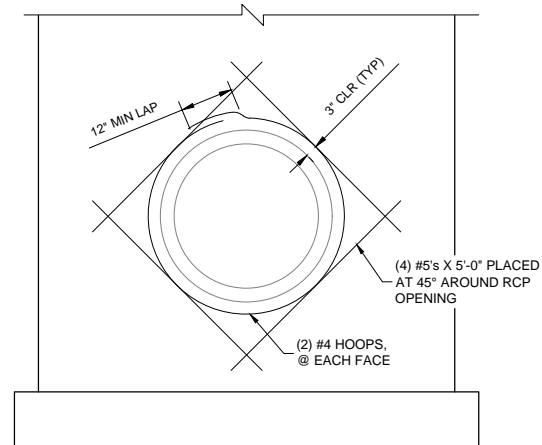
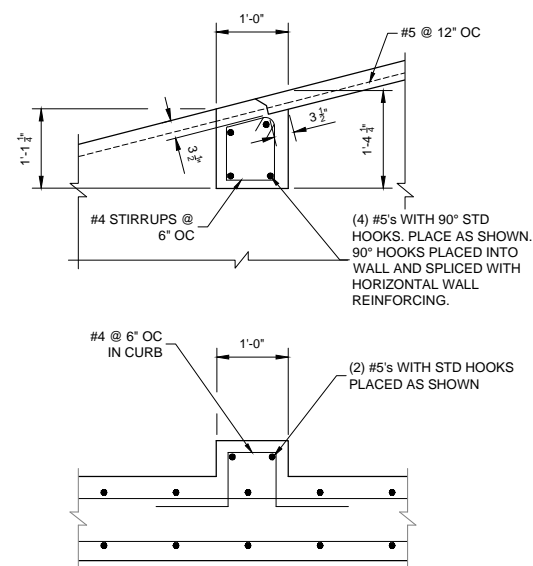
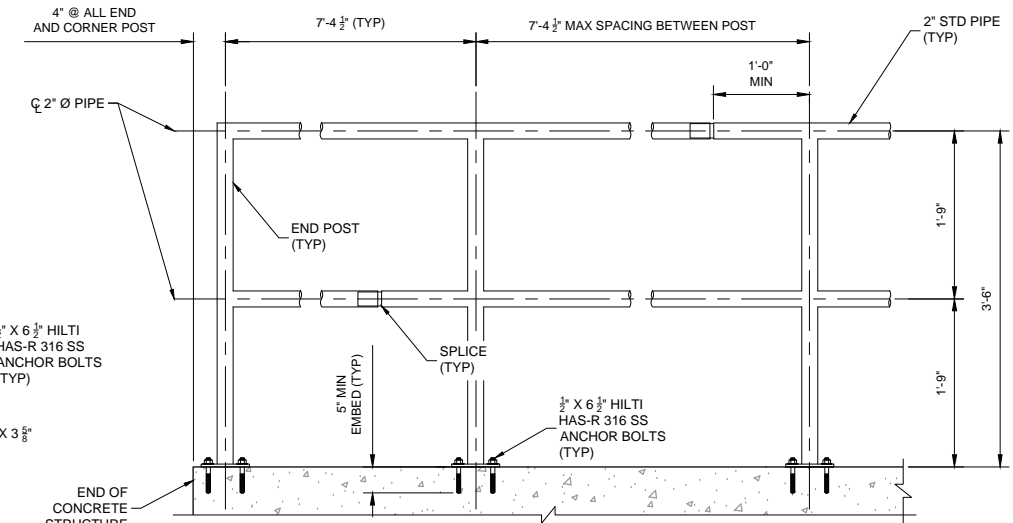
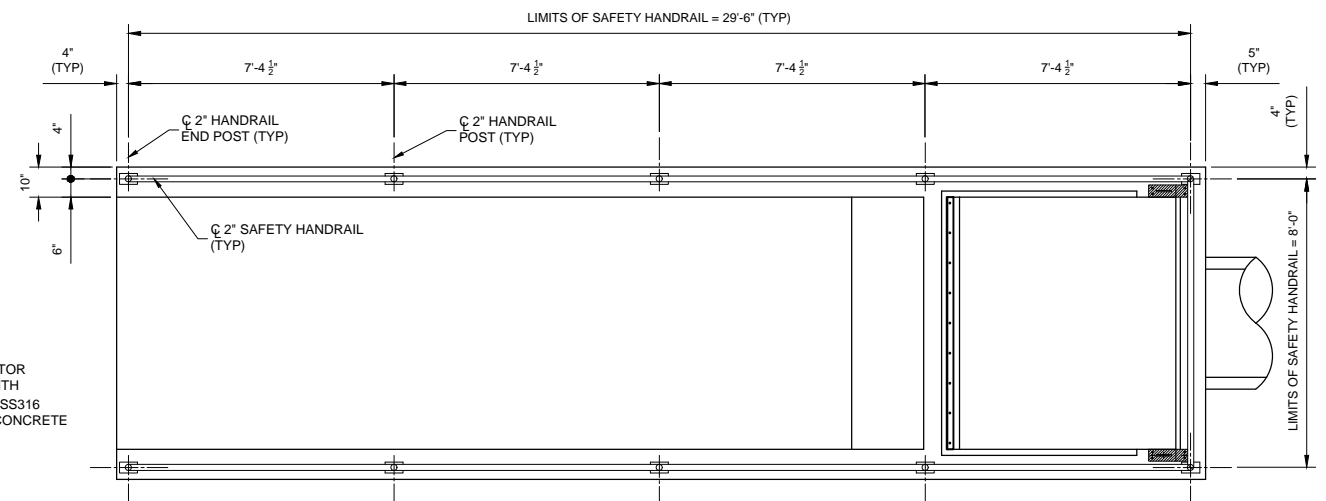
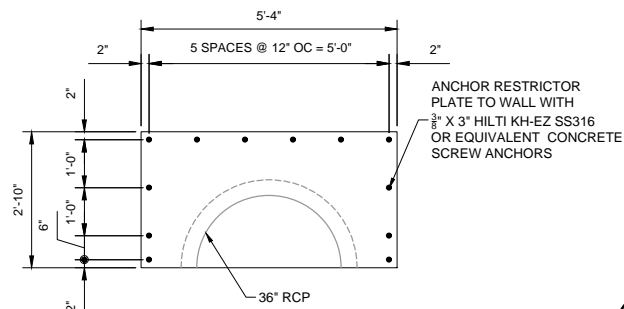
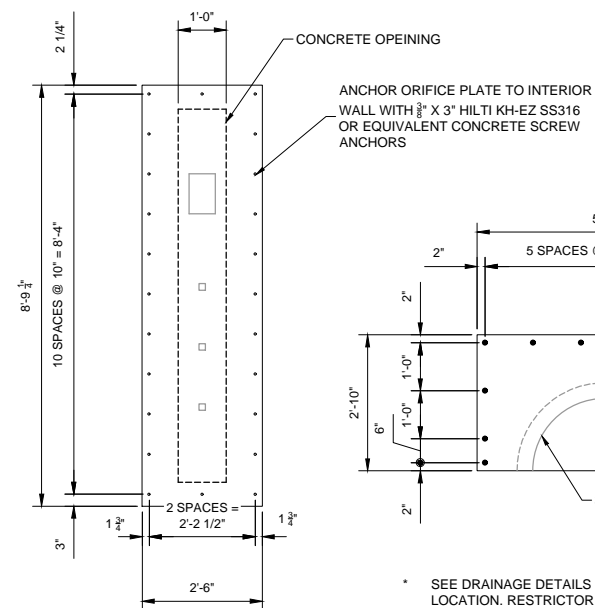
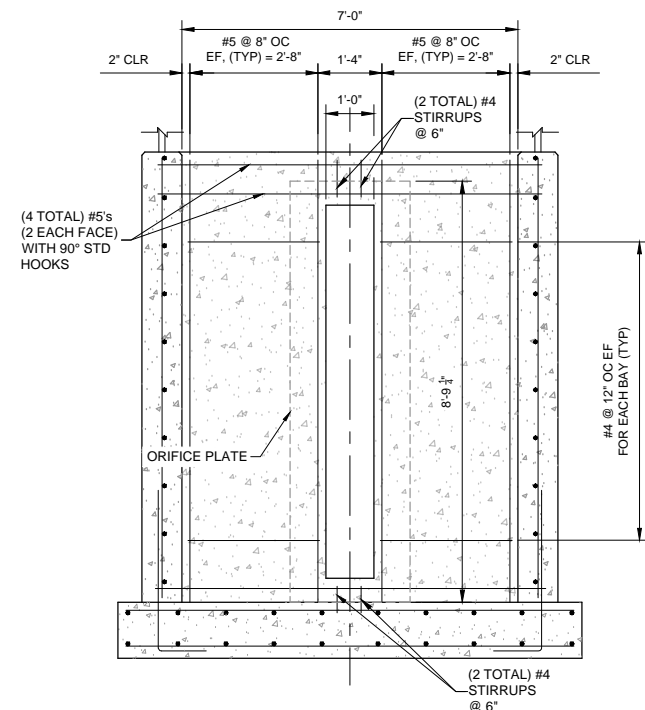
STRUCTURAL NOTES:

STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

- HSS STEEL SHALL BE ASTM A500 GR. B, Fy = 46 KSI.
- STEEL ANGLES, PLATES, AND FLAT BAR SHALL BE ASTM A36, Fy = 36 KSI.
- STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED IN CONFORMANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, 14TH EDITION, INCLUDING ALL STEEL SPECIFICATIONS.
- ALL STEEL AND STEEL CONNECTING ELEMENTS SHALL BE GALVANIZED ACCORDING TO ASTM A123, (AASHTO M111) UNLESS NOTED OTHERWISE.
- WELDING SHALL CONFORM TO CURRENT AWS D1.1 CODE. WELDING ELECTRODES SHALL BE E70XX.
- ANCHOR BOLTS SHALL BE HILTI-R 304 OR HAS-R 316 AND CONFORM TO ASTM F1554 OR EQUIVALENT. USE HILTI HIT HY 200 ANCHORAGE AND BONDING SYSTEM OR EQUIVALENT TO DRILL AND DOWEL ALL ANCHORS.



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Unit Information Unit Leader							Void:		Detailer: KDL			30 OF 58	
									Sheet Subset: DETAILS	Subset Sheets: ST-2.02			



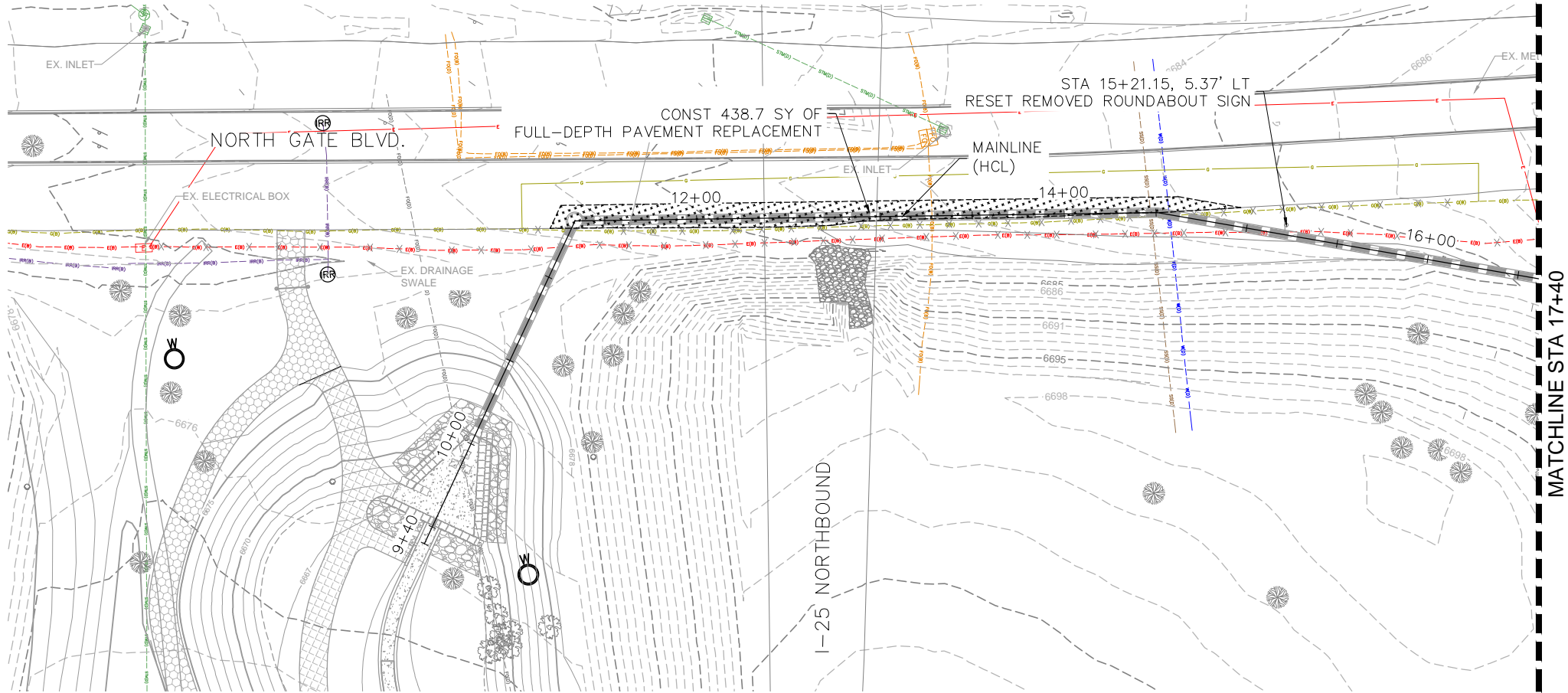
- HANDRAIL NOTES:

1. SAFETY HANDRAIL AND VERTICAL POST SHALL BE 2" STANDARD STEEL PIPE. PIPE SHALL BE ASTM A53 GR. B, WITH $F_y = 35$ KSI. VERTICAL POST SPACING SHALL BE AS SHOWN ON THE DRAWINGS.
2. ALL WELDING SHALL CONFORM TO AWS D1.1. WELDS SHALL BE A MINIMUM $\frac{1}{8}$ " CONTINUOUS FILLET WELDS UNLESS NOTED OTHERWISE.
3. AFTER ALL WELDS ARE COMPLETE, ALL SHARP EDGES SHALL BE GROUND SMOOTH AND SURFACES THOROUGHLY CLEANED.
4. THE COMPLETED HANDRAIL AND POSTS SHALL BE CLEANED TO REMOVE ALL DIRT, DEBRIS, AND ALL FOREIGN MATERIAL. THE 2" STANDARD PIPE HANDRAIL SHALL BE PAINTED BLACK. THE STEEL PIPE SHALL RECEIVE ONE COAT OF PRIMER AND TWO COATS OF INDUSTRIAL ENAMEL.
5. USE HILTI HIT-HY 200 ANCHORING AND BONDING SYSTEM OR EQUIVALENT TO INSTALL ANCHOR BOLTS.



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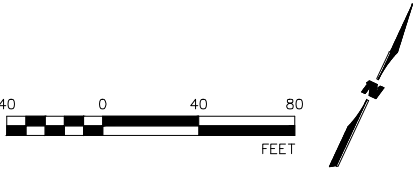
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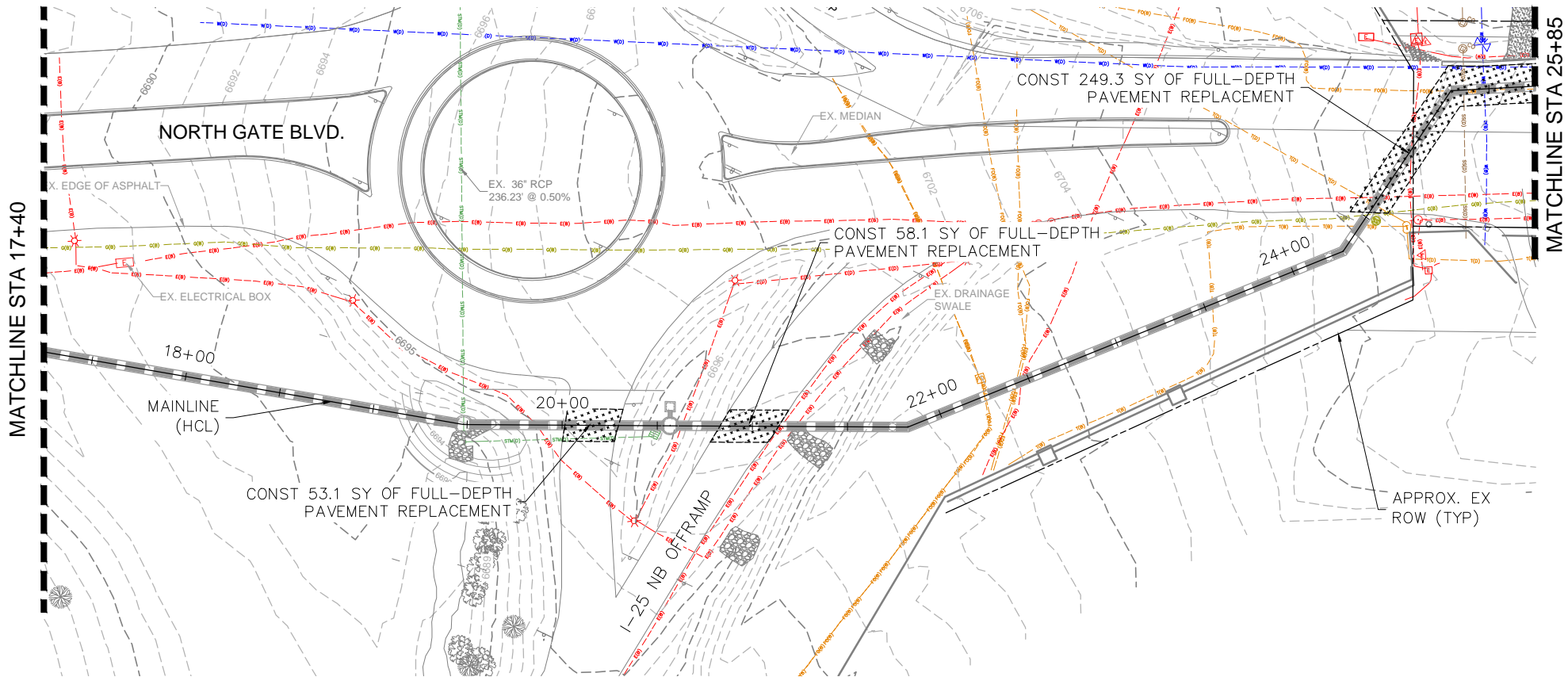
ROADWAY RECONSTRUCTION PLAN

NOTES

1. REPLACEMENT OF INFRASTRUCTURE THAT WAS REMOVED SHALL BE SCHEDULED IN A MANNER THAT MINIMIZES THE TIME BETWEEN REMOVAL AND REPLACEMENT OF THE FACILITY.
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5. SEE DETAIL SHEET SD-2.06 FOR PAVEMENT SECTIONS.
6. ALL REPLACEMENT CURB AND GUTTER SHALL MATCH EXISTING.



Print Date: November 12, 2024		<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			<div><div>811</div><div>Know what's below. Call before you dig.</div></div> <div><div><div>EL PASO COUNTY, COLORADO</div><div>EST. 1861</div></div><div><div></div></div><div><div><div>WILSON</div><div>& COMPANY</div></div><div>5755 Mark Dabling Blvd. Suite 100 Colorado Springs, CO 80919 Phone: 719-520-5800 FAX: 719-520-0108</div></div></div>	As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT			Project No./Code	
File Name: 1.01 - 1.04 ROAD - PLAN & PROFILE.DWG			Date:	Comments	Init.		No Revisions:		ROADWAY RECONSTRUCTION PLAN			CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:							Revised:		Designer:	NAB	Structure		Sheet Number
Unit Information Unit Leader							Void:		Detailer:	KDL	Numbers		32 OF 58
									Sheet Subset: ROADWAY		Subset Sheets: RD-1.01		



ROADWAY RECONSTRUCTION PLAN

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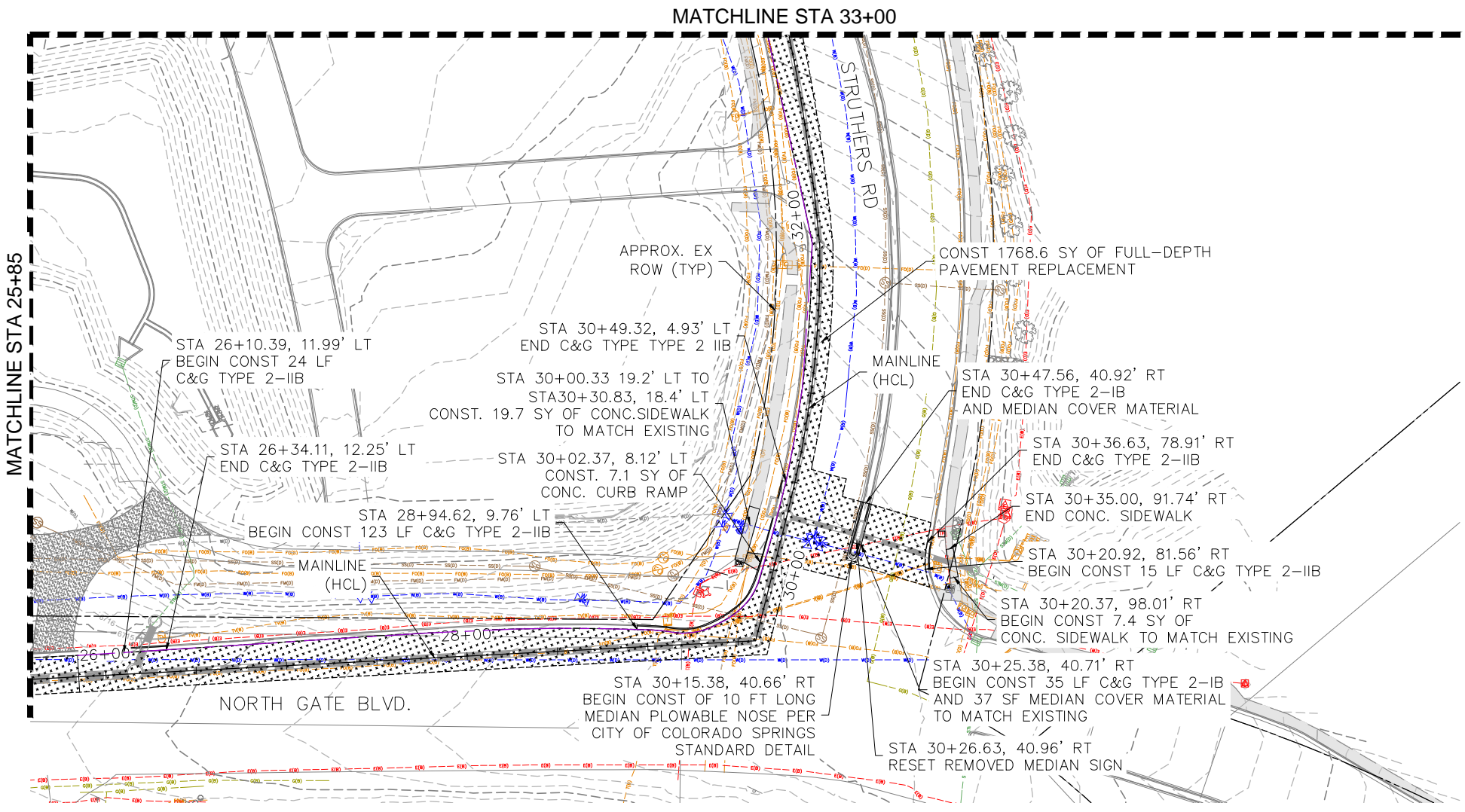


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Revised:		Designer: NAB	Structure Numbers	Sheet Number 33 OF 58	
Void:		Detailer: KDL			
		Sheet Subset: ROADWAY	Subset Sheets: RD-1.02		



ROADWAY RECONSTRUCTION PLAN

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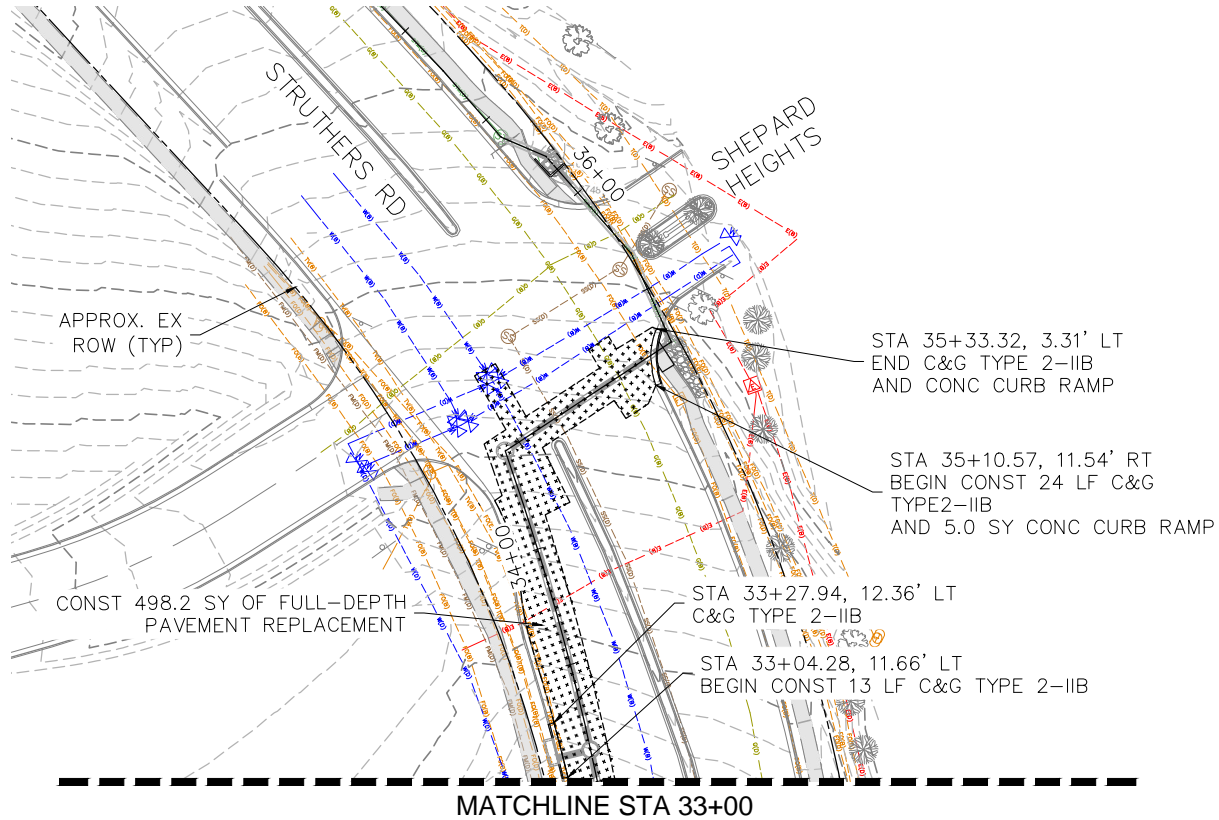
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FAX: 719-520-0108

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Revised:		Designer: NAB	Structure Numbers		Sheet Number 34 OF 58	
Void:		Detailer: KDL				
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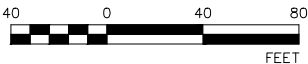
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NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE
AND PERMANENT WATER QUALITY POND PROJECT
STRUTHERS RD AND NORTH GATE BLVD
CDOT PROJECT NO. C040-042 (21233)

GRADING AND EROSION CONTROL PLAN

CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO.

INDEX OF SHEETS		
SUBSET SHEET	DRAWING DESCRIPTION	SHEET NO.
EC-3.01	GEC COVER	36
EC-3.02	GEC AND SURFACING PLAN	37
EC-3.03	GEC AND SURFACING PLAN	38
EC-3.04	GEC AND SURFACING PLAN	39
EC-3.05	GEC AND SURFACING PLAN	40
EC-3.06	GEC NOTES	41
EC-3.07	GEC DETAILS	42
EC-3.08	GEC DETAILS	43
EC-3.09	GEC DETAILS	44



VICINITY MAP
SCALE 1"=2000'

Engineer's Statement for GEC Plan within construction drawing set: These detailed plans and specifications were prepared under my direction and supervision. Said plans and specifications have been prepared according to criteria established by the County for detailed roadway, drainage, grading and erosion control plans and specifications, and said plans and specifications are in conformity with applicable master drainage plans and master transportation plans. Said plans and specifications meet the purposes for which the particular roadway and drainage facilities are designed and are correct to the best of my knowledge and belief. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparation of the detailed plans and specifications.

Vancel Fossinger, P.E.

Date: 11/12/24

Engineer of Record Signature



El Paso County:
County plan review is provided only for general conformance with County Design Criteria. The County is not responsible for the accuracy and adequacy of the design, dimensions, and/or elevations which shall be confirmed at the job site. The County through the approval of this document assumes no responsibility for completeness and/or accuracy of this document.

Filed in accordance with the requirements of the El Paso County Land Development Code, Drainage Criteria Manual, Volumes 1 and 2, and Engineering Criteria Manual as amended.

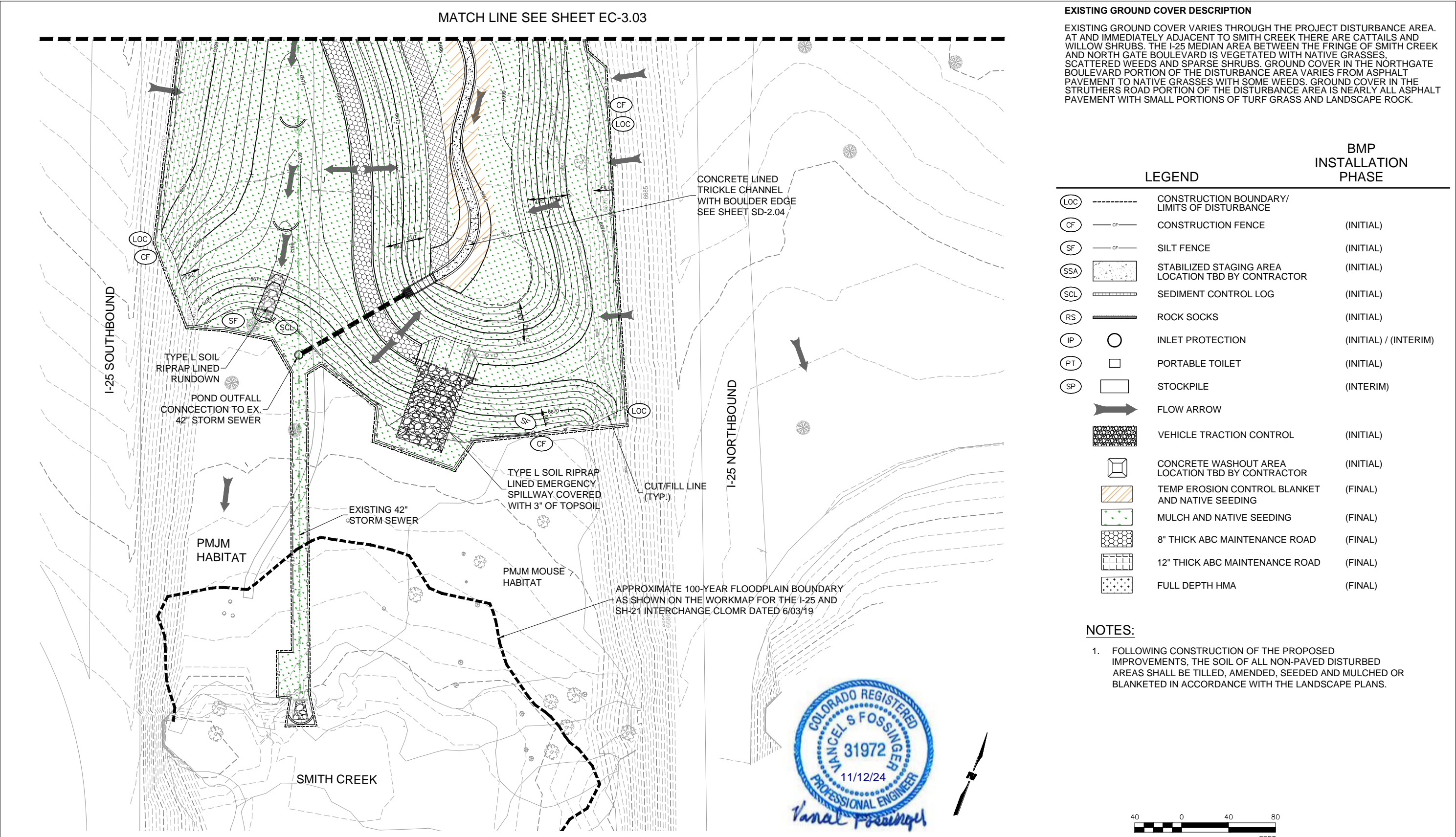
In accordance with ECM Section 1.12, these construction documents will be valid for construction for a period of 2 years from the date signed by the El Paso County Engineer. If construction has not started within those 2 years, the plans will need to be resubmitted for approval, including payment of review fees at the Planning and Community Development Directors discretion.

County Engineer / ECM Administrator

Date

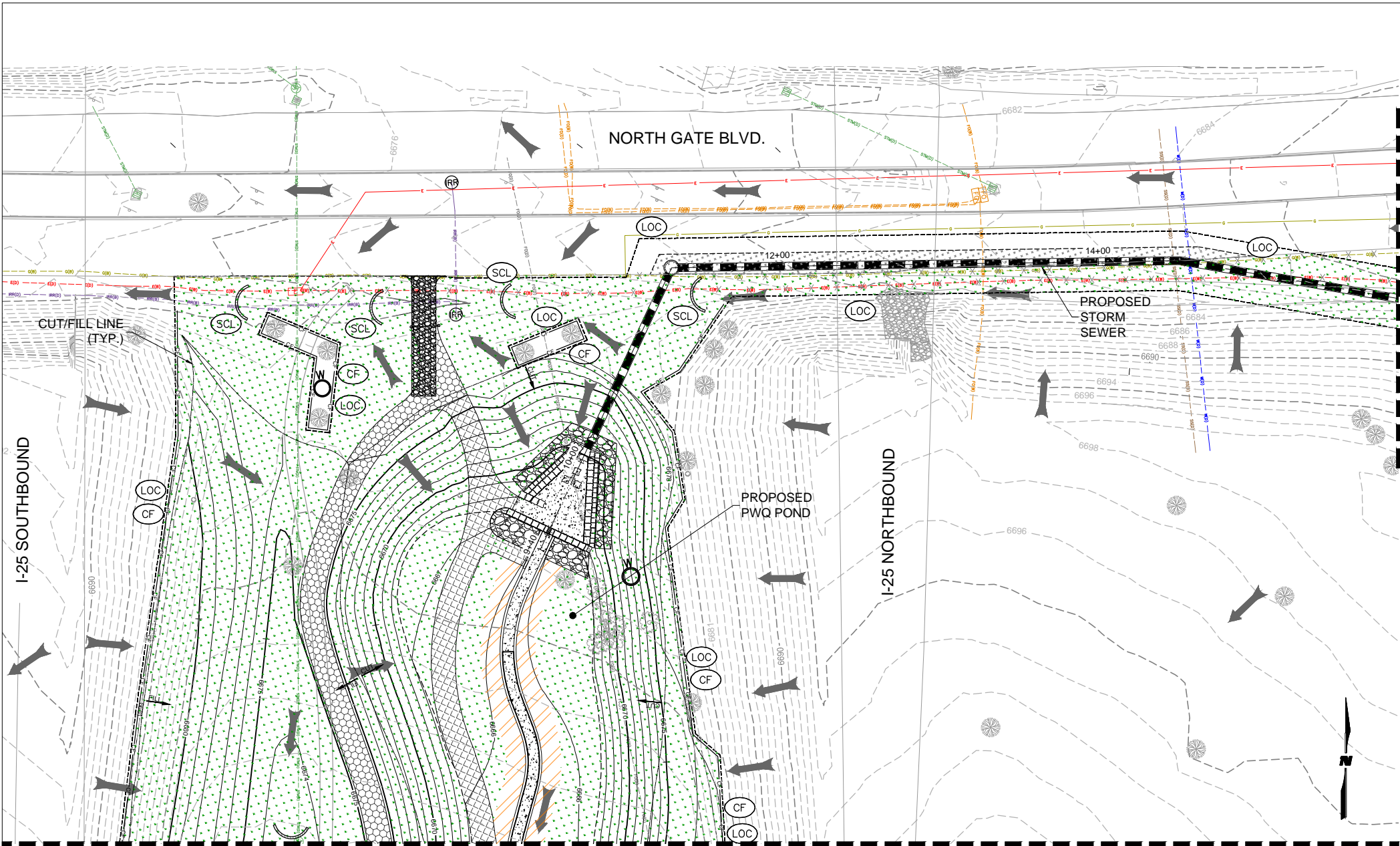
Print Date: November 12, 2024	<div><div></div><div></div><div></div><div></div></div>	Sheet Revisions					 5755 Mark Dabling Blvd. Suite 100 Colorado Springs, CO 80919 Phone: 719-520-5800 FAX: 719-520-0108	As Constructed	NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT			Project No./Code
File Name: 3.01 GEC STORM - COVER.DWG		Date:	Comments	Init.				No Revisions:	GEC COVER			CDOT Project No. C040-042 (21233)
Horiz. Scale: Vert. Scale:								Revised:	Designer: NAB	Structure Numbers		Sheet Number
Unit Information Unit Leader								Void:	Detailer: KDL			36 OF 58
									Sheet Subset: GEC	Subset Sheets: EC-3.01		

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File Name: 3.02 - 3.05 GEC STORM.DWG		Date:	Comments	Init.			No Revisions:		GEC AND SURFACING PLAN		CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:							Revised:		Designer: NAB	Structure Numbers	Sheet Number	
Unit Information Unit Leader							Void:		Detailer: KDL	Subset Sheets: EC-3.02	37 OF 58	

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EXISTING GROUND COVER DESCRIPTION

EXISTING GROUND COVER VARIES THROUGH THE PROJECT DISTURBANCE AREA. AT AND IMMEDIATELY ADJACENT TO SMITH CREEK THERE ARE CATTAILS AND WILLOW SHRUBS. THE I-25 MEDIAN AREA BETWEEN THE FRINGE OF SMITH CREEK AND NORTH GATE BOULEVARD IS VEGETATED WITH NATIVE GRASSES, SCATTERED WEEDS AND SPARSE SHRUBS. GROUND COVER IN THE NORTHGATE BOULEVARD PORTION OF THE DISTURBANCE AREA VARIES FROM ASPHALT PAVEMENT TO NATIVE GRASSES WITH SOME WEEDS. GROUND COVER IN THE STRUTHERS ROAD PORTION OF THE DISTURBANCE AREA IS NEARLY ALL ASPHALT PAVEMENT WITH SMALL PORTIONS OF TURF GRASS AND LANDSCAPE ROCK.

LEGEND

			BMP INSTALLATION PHASE
(LOC)	---	CONSTRUCTION BOUNDARY/ LIMITS OF DISTURBANCE	
(CF)	---	CONSTRUCTION FENCE	(INITIAL)
(SF)	---	SILT FENCE	(INITIAL)
(SSA)	[Pattern]	STABILIZED STAGING AREA LOCATION TBD BY CONTRACTOR	(INITIAL)
(SCL)	[Pattern]	SEDIMENT CONTROL LOG	(INITIAL)
(RS)	[Pattern]	ROCK SOCKS	(INITIAL)
(IP)	○	INLET PROTECTION	(INITIAL) / (INTERIM)
(PT)	□	PORTABLE TOILET	(INITIAL)
(SP)	□	STOCKPILE	(INTERIM)
	→	FLOW ARROW	
	[Pattern]	VEHICLE TRACTION CONTROL	(INITIAL)
	[Pattern]	CONCRETE WASHOUT AREA LOCATION TBD BY CONTRACTOR	(INITIAL)
	[Pattern]	TEMP EROSION CONTROL BLANKET AND NATIVE SEEDING	(FINAL)
	[Pattern]	MULCH AND NATIVE SEEDING	(FINAL)
	[Pattern]	8" THICK ABC MAINTENANCE ROAD	(FINAL)
	[Pattern]	12" THICK ABC MAINTENANCE ROAD	(FINAL)
	[Pattern]	FULL DEPTH HMA	(FINAL)

NOTES:

1. FOLLOWING CONSTRUCTION OF THE PROPOSED IMPROVEMENTS, THE SOIL OF ALL NON-PAVED DISTURBED AREAS SHALL BE TILLED, AMENDED, SEEDED AND MULCHED OR BLANKETED IN ACCORDANCE WITH THE LANDSCAPE PLANS.



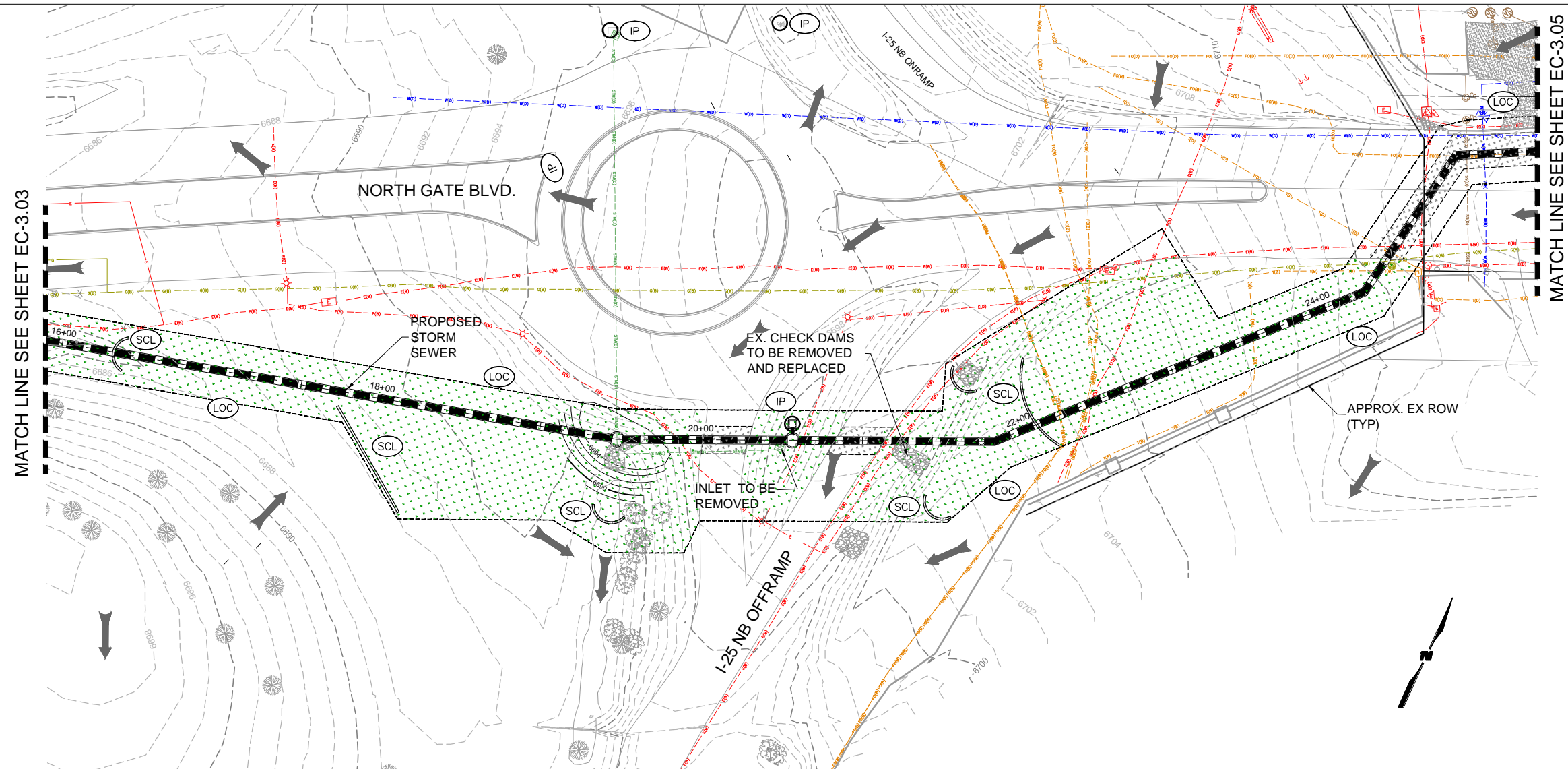
Print Date: November 12, 2024
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Unit Information Unit Leader

Sheet Revisions			
Date:	Comments	Init.	

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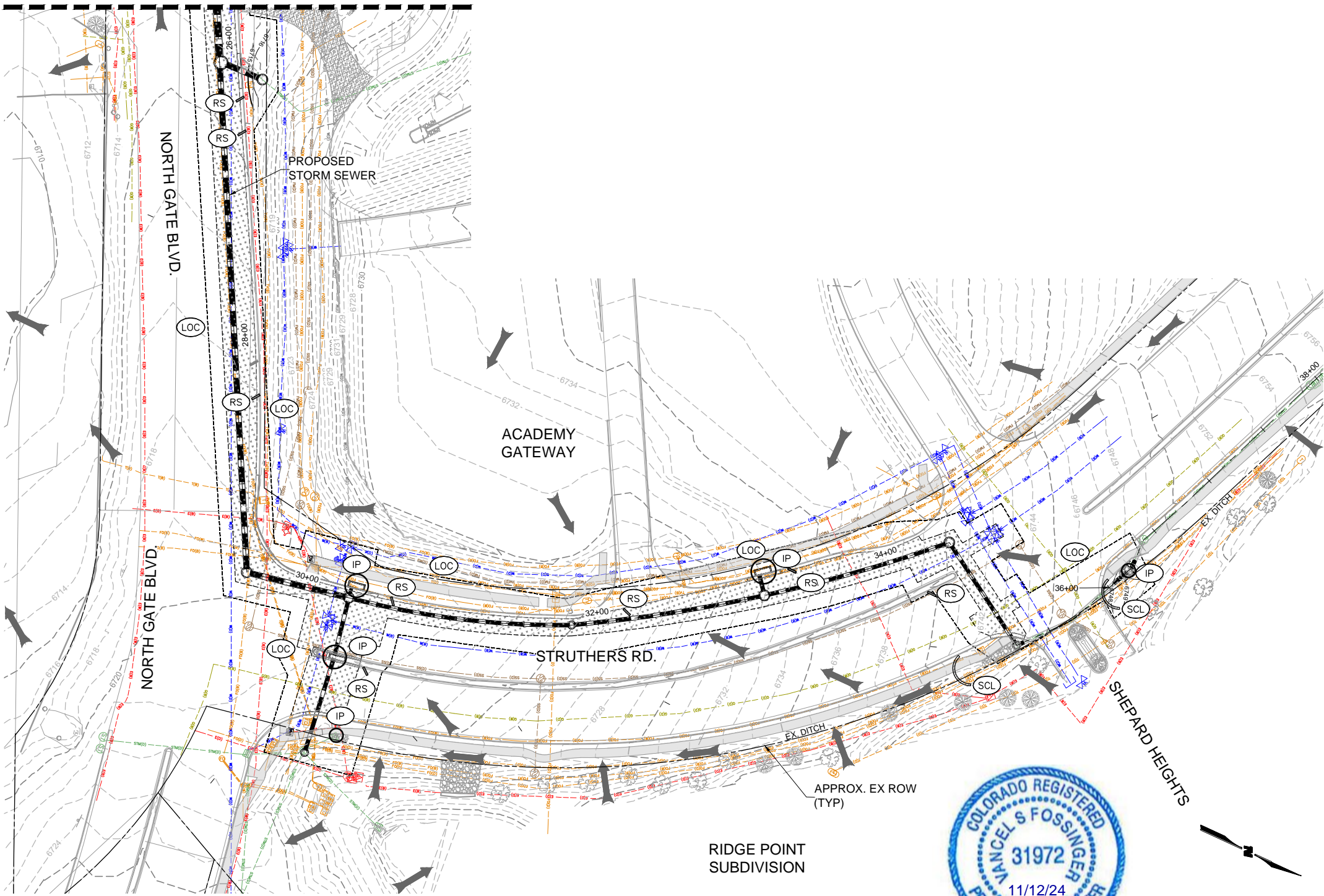
5755 Mark Dabling Blvd.
Suite 100
Colorado Springs, CO 80919
Phone: 719-520-5800
FAX: 719-520-0108

As Constructed	NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT			Project No./Code
No Revisions:	GEC AND SURFACING PLAN			
Revised:	Designer: NAB	Structure Numbers		Sheet Number
Void:	Detailer: KDL	Subset Sheets: EC-3.03		
	Sheet Subset: GEC			38 OF 58



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Unit Information Unit Leader							Detailer:	KDL			39 OF 58	
						Void:	Sheet Subset:	GEC	Subset Sheets:	EC-3.04		

MATCH LINE SEE SHEET 39



EXISTING GROUND COVER DESCRIPTION

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LEGEND

		BMP INSTALLATION PHASE
(LOC)	-----	CONSTRUCTION BOUNDARY/ LIMITS OF DISTURBANCE
(CF)	—CF—	CONSTRUCTION FENCE (INITIAL)
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		Sheet Subset: GEC	Subset Sheets:	EC-3.05		

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STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A “NOTICE TO PROCEED” HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.

13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER’S LABELS.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE “COLORADO WATER QUALITY CONTROL ACT” (TITLE 25, ARTICLE 8, CRS), AND THE “CLEAN WATER ACT” (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY TERRACON CONSULTANTS INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD – PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT



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File Name: 3.06 GEC - NOTES.DWG		Date:	Comments	Init.		No Revisions:		GEC NOTES		CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:						Revised:	Designer: NAB	Structure Numbers		Sheet Number	
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							Sheet Subset: GEC	Subset Sheets: EC-3.06			

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SM-3

Construction Fence (CF)

CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF CONSTRUCTION FENCE.
- CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE CONTRAST-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
- STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
- CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

CF-2

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

November 2010

Construction Fence (CF)

SM-3

CONSTRUCTION FENCE MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- CONSTRUCTION FENCES SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM TOWN OF PRINCE, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

CF-3

ROCK SOCK PLAN

ROCK SOCK SECTION

ROCK SOCK OVERLAP

GRADATION TABLE

MASS PERCENT PASSING SQUARE MESH SIEVES	
No. 4	
2"	100
1 1/2"	90-100
1"	20-55
3/4"	0-15
3/8"	0-5

MATCHES SPECIFICATIONS FOR No. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M-43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES

INSTALLATION NOTES

- CRUSHED ROCK SHALL BE BETWEEN MAX. 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET AND MIN. 3/4" CRUSHED ROCK.
- WIRE MESH SHALL BE SECURED USING 'HOG RINGS' OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED OR DAMAGED BEYOND REPAIR.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES 1/2 OF THE HEIGHT OF THE ROCK SOCK.
- ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL DISTURBED AREA IS STABILIZED.
- PERMANENTLY STABILIZE AREA AFTER ROCK SOCKS HAVE BEEN REMOVED.

STORMWATER ENTERPRISE

ROCK SOCK

APPROVED: _____

CITY ENGINEER

ISSUED: 10/7/19

REVISED: _____

DRAWING NO. 800-042

RS

CONCRETE WASHOUT AREA PLAN

SECTION A-A'

CONCRETE WASHOUT AREA

INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF CONCRETE WASHOUT AREA
- LOCATE AT LEAST 50' AWAY FROM STATE WATERS, MEASURED HORIZONTALLY.
- AN IMPERMEABLE LINER (15 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
- DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
- THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON-SITE.
- CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8'.
- CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
- SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 1/2 THE HEIGHT OF THE CONCRETE WASH AREA.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WASTE-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

STORMWATER ENTERPRISE

CONCRETE WASHOUT AREA

APPROVED: _____

CITY ENGINEER

ISSUED: 10/7/19

REVISED: 8/18/2020

DRAWING NO. 800-CWA-1

CWA

SEDIMENT CONTROL LOG

SECTION A-A'

SEDIMENT CONTROL LOG JOINTS

INSTALLATION NOTES

- ALL SEDIMENT CONTROL LOGS MUST BE EMBEDDED TO 1/2 OF THE HEIGHT OF THE LOG.
- LARGER DIAMETER SEDIMENT CONTROL LOGS NEED TO BE EMBEDDED DEEPER.
- PLACE SEDIMENT CONTROL LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSDIOR OR COCONUT FIBER, AND SHALL BE FREE FROM ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- IF USING AS SLOPE PROTECTION, INSTALL SEDIMENT CONTROL LOGS ALONG THE CONTOUR.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- PERMANENTLY STABILIZE AREA AFTER SEDIMENT CONTROL LOGS HAVE BEEN REMOVED.

STORMWATER ENTERPRISE

SEDIMENT CONTROL LOGS

APPROVED: _____

CITY ENGINEER

ISSUED: 10/7/19

REVISED: _____

DRAWING NO. 800-SCL

SCL

Print Date: November 12, 2024
File Name: 3.06 GEC - DETAILS.DWG
Horiz. Scale: Vert. Scale:
Unit Information Unit Leader

Sheet Revisions			
Date:	Comments	Init.	

Know what's below.
Call before you dig.

5755 Mark Dabling Blvd.
Suite 100
Colorado Springs, CO 80919
Phone: 719-520-5800
FAX: 719-520-0108

As Constructed

No Revisions:

Revised:

Void:

NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT

GEC DETAILS

Designer: NAB
Detailer: KDL
Sheet Subset: GEC
Subset Sheets: EC-3.07

Project No./Code

CDOT Project No. C040-042 (21233)

Sheet Number

42 OF 58

c:\users\mgarcia\appdata\local\temp\proj\projwise\wci_projects\07 gec - details.s.dwg 11/12/2024

EROSION CONTROL BLANKET

STAKING PATTERN PER MANUFACTURER SPECIFICATION OR 18" O.C.
OVERLAPPING JOINT
6" OVERLAP
6"x6" TRENCH (TYPICAL)
KEY IN EDGES

FLOW →
COMPACTED SOIL
STAPLE
PERIMETER ANCHOR TRENCH
STAPLES
JOINT ANCHOR TRENCH
INTERMEDIATE CHECK SLOT
FLOW →
COMPACTED SOIL
STAPLE
OVERLAPPING JOINT
FLOW →
COMPACTED SOIL
STAPLE
STAPLE CHECK
TO BE USED ON SLOPE EVERY 15 FEET

ECB

STORMWATER ENTERPRISE
APPROVED: [Signature]
ISSUED: 10/7/19 REVISED: 8/16/2020 DRAWING NO. 900-ECB-1

INSTALLATION NOTES

- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
- IN AREAS WHERE EROSION CONTROL BLANKETS ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOST PRIOR TO EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.
- INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER FOR EROSION CONTROL BLANKETS ON SLOPES.
- MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
- STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.
- COMPACT ALL TRENCHES.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE GEC INSPECTOR.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING
STRAW	—	100%	—	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN.	70% MAX.	—	DOUBLE/NATURAL
COCONUT	100%	—	—	DOUBLE/NATURAL
EXCELSIOR	—	—	100%	DOUBLE/NATURAL

ECB

STORMWATER ENTERPRISE
APPROVED: [Signature]
ISSUED: 10/7/19 REVISED: 8/16/2020 DRAWING NO. 900-ECB-2

Stabilized Staging Area (SSA)

SM-6

SSA-1, STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF STAGING AREA(S).
 - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REPLACED OR REDEGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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SSA-3

SM-6

Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

SSA-4

AGGREGATE VEHICLE TRACKING CONTROL

SECTION A-A'

INSTALLATION NOTES

- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
- STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
- ROCK SHOULD CONSIST OF 6" MINUS ROCK.
- INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
- ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
- PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

VTC

STORMWATER ENTERPRISE
APPROVED: [Signature]
ISSUED: 10/7/19 REVISED: 8/16/2020 DRAWING NO. 900-VTC

Dewatering Operations (DW)

SM-9

DW

DW-1, DEWATERING POND ALREADY FILLED WITH WATER

DW-2, DEWATERING SUMP FOR SUBMERSED PUMP

DW-3, SUMP DISCHARGE SETTLING BASIN

DW-4, DEWATERING FILTER BAG

SECTION A

November 2010 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

DW-3

DW-4

Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3

November 2010

SM-9

Dewatering Operations (DW)

DW

DW-4, DEWATERING FILTER BAG

DWATERING INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF DEWATERING EQUIPMENT.
 - TYPE OF DEWATERING OPERATION (DW-1 TO DW-4).
- THE OWNER OR CONTRACTOR SHALL OBTAIN A CONSTRUCTION DISCHARGE (DEWATERING) PERMIT FROM THE STATE PRIOR TO ANY DEWATERING OPERATIONS DISCHARGING FROM THE SITE. ALL DEWATERING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT.
- THE OWNER OR OPERATOR SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY TO PERMIT EXCAVATION AND SUBSEQUENT CONSTRUCTION IN DRY CONDITIONS AND TO LOWER AND MAINTAIN THE GROUNDWATER LEVEL A MINIMUM OF 2-FEET BELOW THE LOWEST POINT OF EXCAVATION AND CONTINUOUSLY MAINTAIN EXCAVATIONS FREE OF WATER UNTIL BACK-FILLED TO FINAL GRADE.

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DW-4

Dewatering Operations (DW)

SM-9

DW

DW-4, DEWATERING FILTER BAG

DWATERING INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF DEWATERING EQUIPMENT.
 - TYPE OF DEWATERING OPERATION (DW-1 TO DW-4).
- THE OWNER OR CONTRACTOR SHALL OBTAIN A CONSTRUCTION DISCHARGE (DEWATERING) PERMIT FROM THE STATE PRIOR TO ANY DEWATERING OPERATIONS DISCHARGING FROM THE SITE. ALL DEWATERING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT.
- THE OWNER OR OPERATOR SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY TO PERMIT EXCAVATION AND SUBSEQUENT CONSTRUCTION IN DRY CONDITIONS AND TO LOWER AND MAINTAIN THE GROUNDWATER LEVEL A MINIMUM OF 2-FEET BELOW THE LOWEST POINT OF EXCAVATION AND CONTINUOUSLY MAINTAIN EXCAVATIONS FREE OF WATER UNTIL BACK-FILLED TO FINAL GRADE.

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DW-5

Print Date: November 12, 2024	Sheet Revisions					WILSON & COMPANY 5755 Mark Dabling Blvd. Suite 100 Colorado Springs, CO 80919 Phone: 719-520-5800 FAX: 719-520-0108	As Constructed		NORTH GATE BOULEVARD / STRUTHERS ROAD DRAINAGE AND PERMANENT WATER QUALITY POND PROJECT		Project No./Code	
File Name: 3.07 GEC - DETAILS.DWG	Date:	Comments	Init.				No Revisions:		GEC DETAILS		CDOT Project No. C040-042 (21233)	
Horiz. Scale: Vert. Scale:							Revised:	Designer: NAB	Structure Numbers	Sheet Number		
Unit Information Unit Leader							Void:	Detailer: KDL	Subset Sheets: EC-3.09	44 OF 58		

UTILITY CONTACTS

UTILITY COMPANY	CONTACT NAME	TELEPHONE	E-MAIL
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COLORADO SPRINGS UTILITIES (CSU) - ELECTRIC/GAS	TIMOTHY WENDT	719-668-4962	TWENDT@CSU.ORG
COLORADO SPRINGS UTILITIES (CSU) - WATER/SANITARY	ROCKIE WILEY	719-668-4675	RWILEY@CSU.ORG
COLORADO SPRINGS UTILITIES (CSU) - FIBER	CHANCE DAVES	719-668-3913	CDAVES@CSU.ORG
COLORADO SPRINGS TRAFFIC	BRYAN CURTIS	719-385-7603	BRYAN.CURTIS@COLORADOSPRINGS.GOV
COMCAST	JOHN ETTER	N/A	JOHN_ETTER@COMCAST.COM
DONALA WATER & SANITATION DISTRICT	RONNY WRIGHT	719-499-8256	RONNYW@DONALAWATER.COM
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LUMEN	ROBERT MCLEOD	303-949-2187	RMCLEOD@CONGRUEX.COM
MCI	N/A	N/A	VZ.CSP.BAU.ENGINEERING@VERIZON.COM
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SPRINT	RUSSELL MIX	TBD	RUSSELL.MIX@T-MOBILE.COM
ZAYO GROUP	R.D. BISHOP	801-897-2503	RDBISHOP@COBBFENDLEY.COM
ZAYO GROUP	N/A	N/A	ZAYO.RELO.COLORADO.COM

UTILITY LEGEND














QUALITY LEVEL D

---	E(D)	---	E(D)	---	E(D)	---	ELECTRIC
---	FO(D)	---	FO(D)	---	FO(D)	---	FIBER OPTIC
---	FO(D)	---	FO(D)	---	FO(D)	---	FIBER OPTIC (ABND)
---	G(D)	---	G(D)	---	G(D)	---	GAS
---	FM(D)	---	FM(D)	---	FM(D)	---	SANITARY FORCE MAIN
---	SS(D)	---	SS(D)	---	SS(D)	---	SANITARY SEWER
---	STM(D)	---	STM(D)	---	STM(D)	---	STORM
---	T(D)	---	T(D)	---	T(D)	---	TELEPHONE
---	W(D)	---	W(D)	---	W(D)	---	WATER
---	W(D)	---	W(D)	---	W(D)	---	WATER (ABND)

QUALITY LEVEL B

---	TV(B)	---	TV(B)	---	TV(B)	---	CABLE TV
---	E(B)	---	E(B)	---	E(B)	---	ELECTRIC
---	FO(B)	---	FO(B)	---	FO(B)	---	FIBER OPTIC
---	G(B)	---	G(B)	---	G(B)	---	GAS
---	IRR(B)	---	IRR(B)	---	IRR(B)	---	IRRIGATION
---	T(B)	---	T(B)	---	T(B)	---	TELEPHONE
---	W(B)	---	W(B)	---	W(B)	---	WATER

ABOVE GROUND SURVEY FEATURES

	CELL TOWER		SANITARY MANHOLE
	ELECTRIC LIGHT POLE		SANITARY SEWER CLEANOUT
	ELECTRIC METER		STORM FLARED END SECTION
	ELECTRIC STUB		STORM INLET
	ELECTRIC TRANSFORMER		STORM INLET STRUCTURE
	ELECTRIC VAULT		STORM MANHOLE
	FIBER OPTIC BOX		TELEPHONE CABINET
	FIBER OPTIC MANHOLE		TELEPHONE PEDESTAL
	FIBER OPTIC PEDESTAL		TELEVISION PEDESTAL
	FIBER OPTIC VAULT		TRAFFIC BOX
	FIRE HYDRANT		TRAFFIC SIGN
	GAS TEST POINT		TRAFFIC SIGNAL POLE
	GUYWIRE		WATER VALVE
	IRRIGATION MH		WATER WELL

QUALITY LEVEL A

	TEST HOLE
---	-----------

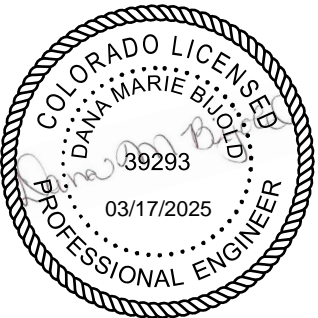
PROPOSED

---	E	---	E	---	E	---	ELECTRIC
---	G	---	G	---	G	---	GAS
• X	X	• X	X	• X	X	• X	REMOVAL

UTILITY GENERAL NOTES

- UTILITIES ARE DEPICTED ON THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED QUALITY LEVELS AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEERS/UTILITY ENGINEERING & SURVEYING INSTITUTE/CONSTRUCTION INSTITUTE (ASCE/UESI/CI) 38-22, "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES." LOCATION OF EXISTING UTILITIES IS DEPICTED ACCORDING TO THE BEST AVAILABLE INFORMATION AND REPRESENT CONDITIONS AT THE TIME OF DATA COLLECTION.
- THE CONTRACTOR SHALL COMPLY WITH ARTICLE 1.5 OF TITLE 9, CRS ("EXCAVATION REQUIREMENTS") WHEN EXCAVATING OR GRADING IS PLANNED IN THE AREA OF UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL CONTACT COLORADO 811 AT LEAST THREE (3) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THESE PLANS DO NOT RELIEVE THE CONTRACTOR FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE STATUTES AND PROCEDURES DURING EXCAVATION.
- PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES TO COORDINATE SCHEDULING AT NO ADDITIONAL COSTS TO EL PASO COUNTY. SHOULD ANY CONFLICTS, RECONSTRUCTION, OR OTHER INTERRUPTIONS BE REQUIRED, THE CONTRACTOR SHALL COORDINATE UTILITY SCHEDULING.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE FOR EVIDENCE OF FAILURES OR DEFICIENCIES IN UTILITY COMPANY FACILITIES AND TO IMMEDIATELY CALL ANY SUCH EVIDENCE OF PRE-EXISTING DAMAGE TO THE ATTENTION OF THE UTILITY COMPANY ALONG WITH PROPER DOCUMENTATION. THE CONTRACTOR HEREBY AGREES THAT THE REPAIR OF ANY AND ALL DAMAGES (DIRECT OR INDIRECT) THAT MAY BE SUBSEQUENTLY DISCOVERED AND PROVEN TO HAVE BEEN CAUSED BY THE CONSTRUCTION ACTIVITIES, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR WITHOUT SUCH EVIDENCE OF PRE-EXISTING DAMAGE. THE CONTRACTOR HEREBY AGREES THAT DAMAGE WITHIN SIX FEET OF UTILITY COMPANY FACILITIES (DIRECT OR INDIRECT), UP UNTIL THE TIME THE PROJECT HAS BEEN ACCEPTED BY THE ENGINEER, WERE CAUSED BY THE CONSTRUCTION ACTIVITIES. FURTHERMORE, THE REPAIR IS AGREED TO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL UTILITY COMPANY FACILITIES WITHIN THE AREA OF CONSTRUCTION. THIS INCLUDES ALL STEPS NECESSARY TO PREVENT SUBSIDENCE OF THE SOIL ADJACENT TO OR NEAR UTILITY COMPANY FACILITIES.
- ALL COSTS ASSOCIATED WITH FIELD VERIFICATION OF UTILITIES FOR DAMAGE PREVENTION SHALL BE BORNE BY THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- LOCATING EXISTING UTILITIES WILL BE PAID FOR AS POTHOLING. USE OF THE TERM "POTHOLING" SHALL NOT BE CONSTRUED TO IMPLY ANY PARTICULAR METHOD OF PROSPECTING. IT IS ESTIMATED THAT 100 HOURS OF ITEM 203-01597 POTHOLING WILL BE NEEDED AS PART OF THIS PROJECT. POTHOLING OF AN AREA SHALL TAKE PLACE AT LEAST 10 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS IN THAT AREA. HOURS APPROVED FOR PAYMENT UNDER THIS PAY ITEM SHALL BE AT THE DISCRETION OF THE ENGINEER.
- UTILITIES ARE DEPICTED ON THESE PLANS BASED ON THE SUBSURFACE UTILITY ENGINEERING (SUE) INVESTIGATION CONDUCTED BETWEEN DECEMBER 2022 AND JUNE 2023 BY GOODBEE & ASSOCIATES. SEE SUE PLANS FOR MORE INFORMATION.
- ADDITIONAL UTILITY SERVICE LINES MAY BE ENCOUNTERED DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RECONNECT ALL EXISTING SERVICES FOR WATER AND SANITARY LINES. THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY OWNER OR AGENCY ON THEIR SERVICE LINES.
- THE CONTRACTOR SHALL ADJUST ALL MANHOLES AND VALVES TO FINAL GRADE. THE CONTRACTOR SHALL CLEAN ALL VALVE BOXES.
- ALL EXCAVATIONS FOR UTILITY LINES, CULVERTS, TRENCHES, OR TUNNELS SHALL MEET THE REQUIREMENTS OF OSHA OR CDOT, WHICHEVER APPLIES.
- ALL NEW UNDERGROUND FACILITIES, INCLUDING LATERALS UP TO THE STRUCTURE OR BUILDING BEING SERVED, INSTALLED AS PART OF THIS PROJECT MUST BE ELECTRONICALLY LOCATABLE WHEN INSTALLED, IN COMPLIANCE WITH COLORADO REVISED STATUTES, TITLE 9, ARTICLE 1.5-103(10).
- ALL UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE IDENTIFIED ON THESE PLANS.

Print Date: MARCH 17, 2025		<div>R-1</div> <div></div> <div></div> <div></div>	Sheet Revisions			<div>811</div> <div>Know what's below. Call before you dig.</div>	<div></div> <div>WILSON & COMPANY</div> <div>5755 Mark Dabling Blvd. Suite 220 Colorado Springs, CO 80919 Phone: 719-520-5800 FAX: 719-520-0108</div>	As Constructed		NORTH GATE / STRUTHERS PWQ POND UTILITY CONTACTS, NOTES, LEGEND			Project No./Code	
File Name: UTIL-UGN01.DWG			Date:	Comments	Init.			No Revisions:					176103	
Horiz. Scale: Vert. Scale:			03/17/2025	MVEA UPDATES	DB			Revised:		Designer: DB	Structure		Sheet Number	
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<div>GOODBEE & ASSOCIATES, INC.</div> <div></div>										Sheet Subset: UTILITY	Subset Sheets: UGN-01			



UTILITY TEST HOLE SUMMARY TABLE


Test Hole	Utility Owner	Type	Material	Size (in)	DirectBuryConduit	Surface Elevation	Depth to TOP (ft)	TOP Elevation	Aprx. Depth to BOP (ft)	BOP Elevation	Northing	Easting	Notes
TH1A	CSU	Electric	CONC DUCT	31x17	Duct Bank	6677.8	1.8	6676.0	3.3	6674.5	435649.38	190551.70	W 31" x 17" L conc duct
TH1B	CSU	Electric	PVC	4	Conduit	6677.8	1.9	6675.9	2.2	6675.6	435649.74	190551.45	
TH1C	CSU	Electric	DBC	0.5	Direct Bury	6677.8	2.7	6675.1	2.7	6675.1	435650.25	190551.19	0.5" x 2
TH2	ZAYO	Fiber	PE	2	Multi Conduit	-	7.7	-	8.0	-	-	-	2" x 3; hole collapsed. Could not measure utility size, approx 2" utility size
TH3	CSU	Electric	CONC DUCT	36x23	Duct Bank	6683.8	1.2	6682.6	3.1	6680.7	435813.44	190895.94	W 36" x 23" L
TH4	CDOT	Electric	PVC	2	Conduit	6694.9	2.4	6692.5	2.6	6692.3	435947.24	191353.88	
TH5	CDOT	Electric	PVC	2	Conduit	6695.3	2.3	6693.0	2.5	6692.8	435978.66	191423.77	
TH6A	CSU	Electric	CONC DUCT	33x12	Duct Bank	6698.2	2.6	6695.6	3.6	6694.6	436000.34	191473.41	W 33" x 12" L
TH6B	CSU	Electric	PVC	4	Multi Conduit	6698.2	2.0	6696.2	2.3	6695.9	436000.34	191473.77	4" x 2
TH7	CDOT	Electric	PVC	2	Conduit	6697.8	2.1	6695.7	2.2	6695.6	435994.25	191474.77	
TH8	StratusIQ	Fiber	PE	1.5	Multi Conduit	6703.5	3.2	6700.3	3.5	6700.0	436060.56	191561.68	1.5" x 2
TH9	Lumen	Fiber	STL	4	Conduit	6704.0	5.3	6698.7	5.7	6698.3	436073.69	191573.54	STL was rusted
TH10	Falcon Broadband	Fiber	PE	2	Conduit	6704.4	3.5	6700.9	3.7	6700.7	436078.67	191577.50	
TH11	MVEA	Electric	PVC	2	Conduit	6704.5	2.2	6702.3	2.4	6702.1	436085.42	191582.96	
TH11A	MVEA	Electric	DNF	DNF	N/A	6704.5	DNF	DNF	DNF	DNF	436085.43	191582.97	DNF; Trench approximately 25' wide by 6' deep
TH11B	UNK	Fiber	DBC	1	Direct Bury	6704.1	1.7	6702.4	1.8	6702.3	436073.74	191573.92	UNK utility found while searching for CSU E
TH12	Lumen	Telephone	PE	2	Conduit	6707.1	2.1	6705.0	2.3	6704.8	436155.97	191649.44	
TH13	Lumen	Telephone	DBC	1	Direct Bury	6710.1	2.0	6708.1	2.1	6708.0	436225.06	191702.20	
TH14	CSU	Gas	PE	4	N/A	6710.3	2.8	6707.5	3.1	6707.2	436231.93	191702.79	
TH15	Lumen	Telephone	DNF	DNF	N/A	6711.0	DNF	DNF	DNF	DNF	436238.83	191703.42	DNF- could not measure due to ground collapsing. Trenched from the pedestal to the test hole and could not find the line.
TH16A	Donala	Water	DNF	DNF	N/A	6712.4	DNF	DNF	DNF	DNF	436316.54	191728.71	Cleared to 12.2'
TH16B	UNK	Fiber	PE	2	Conduit	6712.4	4.2	6708.2	4.4	6708.0	436327.44	191713.33	UNK FO conduit found in the same hole as 16A
TH17	Lumen	Telephone	Cable	0.75	Direct Bury	6718.1	2.5	6715.6	2.6	6715.5	436486.84	192046.11	Direct bury
TH18	CSU	Electric	PVC	2	Conduit	6718.4	1.0	6717.4	1.2	6717.2	436494.55	192061.96	
TH19	District 20	Fiber	PVC	2	Conduit	6719.2	3.1	6716.1	3.2	6716.0	436504.46	192080.32	
TH21	Sprint	Fiber	DNF	DNF	DNF	6719.5	DNF	DNF	DNF	DNF	436506.21	192084.67	
TH22	District 20	Fiber	PVC	3	Conduit	6719.8	4.3	6715.5	4.6	6715.2	436526.92	192091.75	
TH23	CSU	Electric	PVC	4	Multi Conduit	6719.9	2.9	6717.0	3.5	6716.4	436554.90	192085.66	2" x 4
TH24	Donala	Fiber	PVC	2	Conduit	6719.9	4.2	6715.8	4.3	6715.6	436558.34	192085.32	
TH25	Donala	Water	Pvc	8	N/A	6720.0	5.3	6714.7	5.9	6714.1	436572.40	192081.99	
TH26	District 20	Fiber	PVC	3	Conduit	6720.2	4.1	6716.1	4.4	6715.8	436579.48	192068.14	
TH27	Comcast	Television	PE	2.5	Multi Conduit	6720.1	3.1	6717.0	3.5	6716.6	436580.28	192072.33	2.5" x 2
TH28	Donala	Water	DNF	DNF	DNF	6720.9	DNF	DNF	DNF	DNF	436584.18	192097.95	DNF CLEARED TO 3.8'; Concrete in hole could not find edges. Added TH28.1 approximately 10' north to clear concrete.
TH28.1	Donala	Water	PVC	12	N/A	6721.0	5.5	6715.5	6.5	6714.5	436593.95	192095.25	
TH29	CSU	Electric	PE	2	Multi Conduit	6721.7	2.8	6718.9	3.0	6718.7	436590.26	192131.86	2" and 2.25"
TH30	CSU	Gas	PE	6	N/A	6721.8	4.1	6717.7	4.6	6717.2	436591.83	192143.97	
TH31	MCI	Fiber	PE	2.25	Conduit	6722.5	3.5	6719.0	3.7	6718.8	436594.82	192163.79	
TH32	Lumen	Fiber	DNF	DNF	N/A	6722.8	DNF	DNF	DNF	DNF	436594.64	192168.12	DNF Cleared to 3.5'; large rocks and barrier material encountered.
TH33	CSU	Electric	PVC	2	Conduit	6722.8	1.0	6721.8	1.2	6721.6	436595.48	192172.26	
TH34	Comcast	Fiber	DNF	DNF	DNF	6723.1	DNF	DNF	DNF	DNF	436597.07	192179.44	Cleared to 9.5. 12"+ diameter riprap present 6+ feet into surface
TH35	Comcast	Fiber	DNF	DNF	DNF	6723.7	DNF	DNF	DNF	DNF	436597.26	192181.31	Cleared to 9.5. 12"+ diameter Rip rap 6+ feet into surface
TH36	Comcast	Fiber	PE	2	N/A	6724.5	0.0	6724.5	0.2	6724.3	436598.09	192182.73	Fiber on Surface. Concrete from storm structure approx 1' below fiber line
TH37	MVEA	Electric	PE	6	N/A	6726.4	3.5	6722.9	4.0	6722.4	436598.97	192198.77	
TH38	Lumen	Fiber	PVC	4	Conduit	6724.4	3.8	6720.6	4.1	6720.3	436714.31	192038.33	
TH39	MVEA	Electric	PVC	4	Conduit	6735.6	8.5	6727.1	8.9	6726.7	436882.10	191920.72	
TH40	Comcast	Fiber	PE	2	Multi Conduit	6738.7	4.2	6734.5	4.4	6734.3	436902.14	191879.55	2" x 2; May be FO and TV lines, expected to have further separation based on 811 marks and SUE QLB designation. Found approx 6ft from curb to the west. 811 marks present closer to the curb, excavated to 8ft and swept 3'+ either side.
TH41	Donala	Water	PVC	12	N/A	6739.6	5.3	6734.3	6.3	6733.3	436929.80	191895.25	
TH42	CSU	Gas	PE	6	N/A	6742.8	3.9	6738.9	4.4	6738.4	436980.58	191905.57	
TH43	Donala	Water	PVC	10	N/A	6743.9	9.4	6734.5	10.2	6733.7	436996.80	191896.73	
TH44	Donala	Water	PVC	8	N/A	6744.4	8.5	6735.9	9.1	6735.3	437001.95	191889.97	
TH45	CSU	Gas	PE	4	N/A	6746.0	N/A	N/A	N/A	N/A	437019.20	191867.92	4" gas observed in TH 45 offset 3.2' to S. Added TH 45.1 for accurate depth
TH45.1	CSU	Gas	PE	4	N/A	6745.7	4.5	6741.3	4.8	6740.9	437017.42	191871.31	
TH46	Comcast	Fiber	PE	2	Conduit	6746.2	2.0	6744.2	2.2	6744.0	437022.94	191867.13	
TH47	CDOT	Storm	RCP	42	N/A	6666.7	6.4	6660.3	10.6	6656.1	435068.09	190574.89	Estimated depth based on RCP pipe thickness
TH 48	MVEA	Electric	PE	6	Direct Bury	6711.9	6.2	6705.7	6.7	6705.2	436279.47	191706.99	STL was rusted

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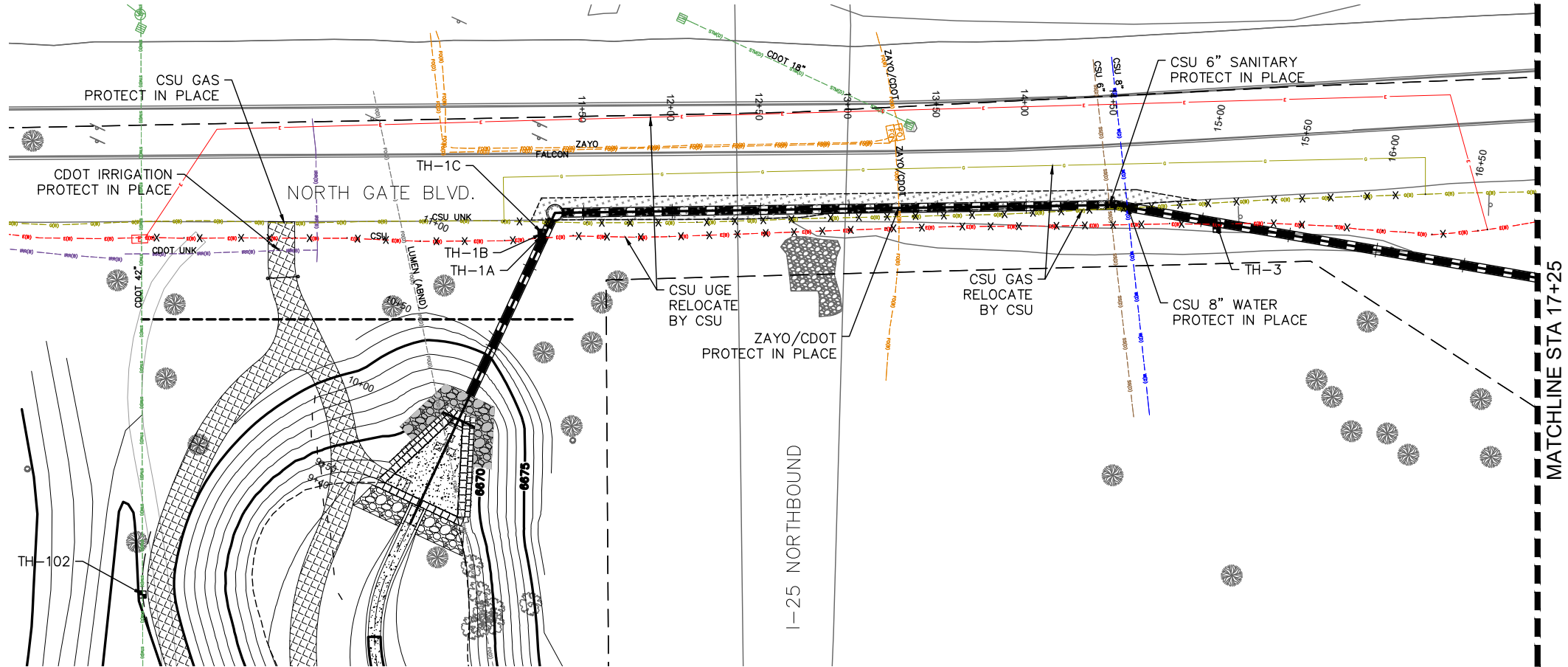
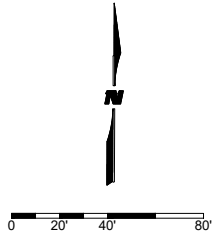
UTILITY TEST HOLE SUMMARY TABLE

Test Hole	Utility Owner	Type	Material	Size (in)	DirectBuryConduit	Surface Elevation	Depth to TOP (ft)	TOP Elevation	Aprx. Depth to BOP (ft)	BOP Elevation	Northing	Easting	Notes
TH101	CDOT	Storm	CONC	42	N/A	6657.2	N/A	N/A	70.5	70.5	434798.99	190695.51	Measured to bottom of headwall
TH102	CDOT	Storm	CONC	42	N/A	6673.9	12.0	6661.9	16.3	6657.6	435369.84	190433.20	Estimated depth based on RCP pipe thickness
TH103	CSU	Electric	DNF	DNF	N/A	6711.2	DNF	DNF	DNF	DNF	436243.45	191704.00	DNF - cleared to 12'. Designated line from MHs just east of roundabout to just pass struthers blvd. Average electronic depth was between 4-6'.
TH104	CSU	Electric	DNF	DNF	N/A	6714.3	DNF	DNF	DNF	DNF	436364.69	191794.30	DNF - added TH104.1 and found in new TH
TH104.1	CSU	Electric	PE	4	Direct Bury	6714.5	4.2	6710.3	4.5	6709.9	436369.01	191791.30	
TH105	CSU	Electric	DNF	DNF	N/A	6719.6	DNF	DNF	DNF	DNF	436517.78	192092.49	DNF - added TH105.1 and found in new TH
TH105.1	CSU	Electric	PE	2.75	Direct Bury	6719.7	4.4	6715.3	4.6	6715.1	436525.43	192090.34	



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- NOTES:
- 1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
 - 2. SEE POND OUTLET PLANS FOR POND DETAILS.
 - 3. SEE UT-05 FOR UTILITY RELOCATION DETAILS IN POND FOOTPRINT.

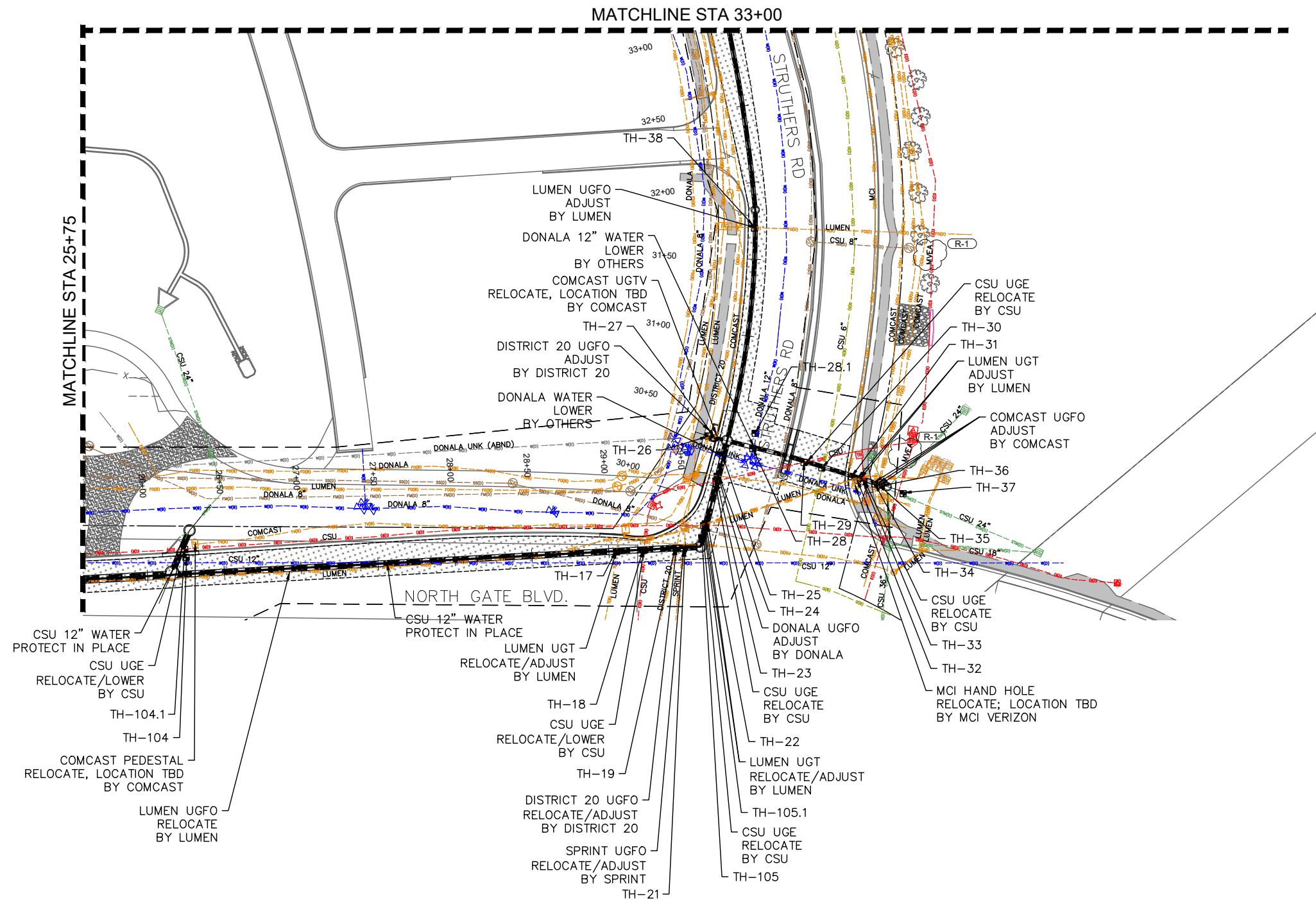
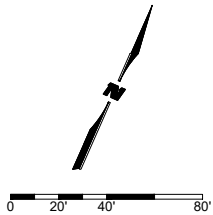
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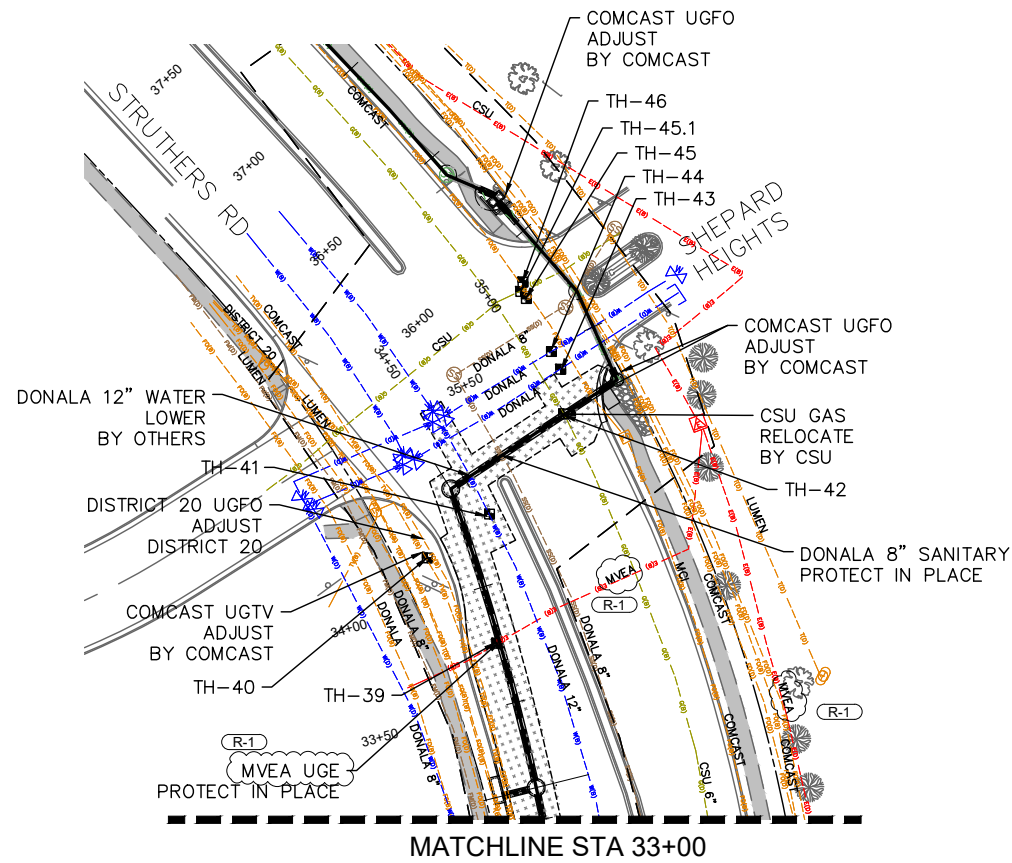
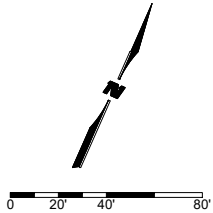




NOTES:
1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.



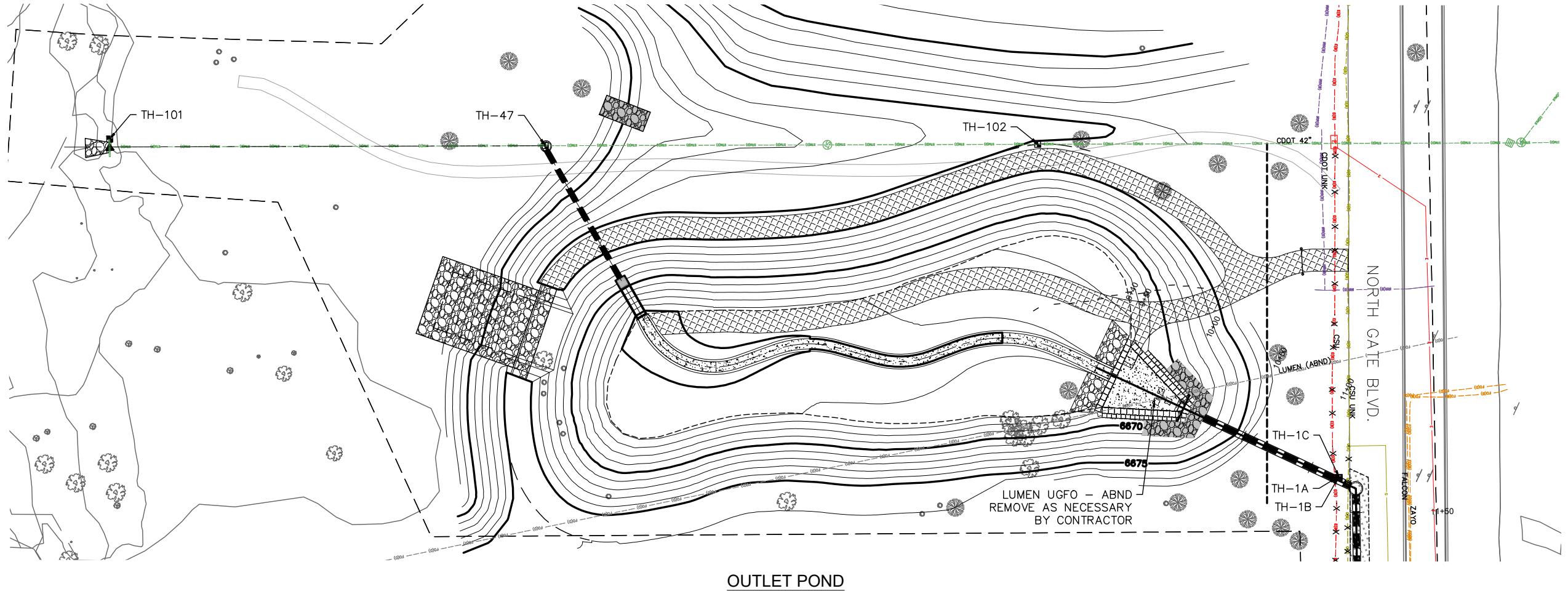
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NOTES:
1. SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.



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- NOTES:
- SEE DRAINAGE PLANS FOR STORM SEWER DETAILS.
 - SEE SHEET UT-01 FOR UTILITY RELOCATION DETAILS ALONG NORTH GATE BLVD.

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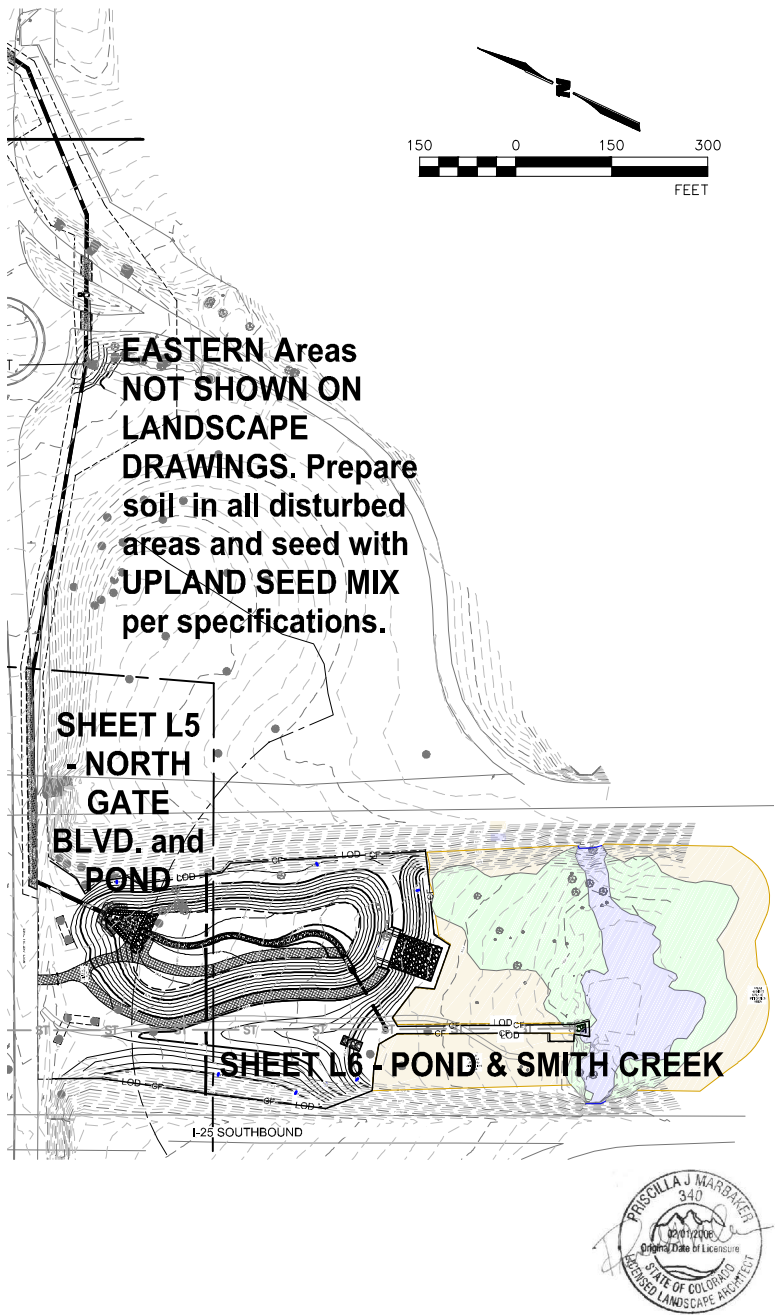
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LANDSCAPE SHEET LEGEND

- L1 Landscape Cover and General Notes
- L2 Soil Amendment, Warranty and General Planting Notes
- L3 Seeding and Planting Notes
- L4 Plant List
- L5 Planting Plan - North Gate Boulevard and Pond
- L6 Planting Plan - Pond and Smith Creek

LANDSCAPE SHEET LAYOUT



GENERAL RESTORATION NOTES

- Vegetative cover at the end of the warranty period will be consistent with the surrounding undisturbed habitats.
- EROSION MITIGATION GUIDELINES FOR THE LANDSCAPE CONTRACTOR
 - The contractor shall limit areas where bare ground exists.
 - When these areas are temporary impacts, reseeding will be promptly initiated. Revegetate all temporarily impacted areas with specified native seed mixes to reduce erosion.
 - Erosion, stormwater, and pollution control BMPs will be implemented during construction to minimize direct impacts to wetlands, streams and riparian areas through erosion and sediment discharge.
 - Erosion and sediment control measures shall strictly adhere to the erosion control plans. Including but not limited to:
 - Utilize vehicle tracking control devices at the site entrance(s).
 - Placement of concrete washout areas, equipment refueling, and staging areas in upland areas at least 100 feet away from wetlands, creeks, and riparian areas. These areas will be located outside any Preble's habitat. The contractor will have a spill prevention plan.
 - All stockpiles shall be protected from sediment transport by surface roughening, watering, and perimeter silt fencing if/as required by the Stormwater Management Plan.
- NOXIOUS WEED CONTROL DURING CONSTRUCTION
 - Noxious weeds will be controlled by the contractor in all disturbed areas and will be implemented from mobilization through the contracted warranty period.
 - Noxious weeds will be controlled by the contractor in all impacted habitat areas until 0 percent of Colorado Noxious Weed Act (Colorado Revised Statutes [CRS] 35-5.5-1011-119) List A species and less than 5 percent of List B or 10 percent of list C species are found in overall plant cover from transects or plot data.
 - To avoid the continued spreading of noxious weeds, all discrete populations of Colorado List A, B, or C noxious weeds found in or within 100 feet of the restoration area will be sprayed with the appropriate herbicide(s) prior to construction. Always follow all label recommendations, precautions and restrictions when using any herbicide. Read and comply with all herbicide labels, organic or non-organic, for application rates, mixing instructions, protective equipment, re-entry period, grazing or harvest restrictions and other safety information. Herbicides should be applied only by responsible, licensed applicators.
- PREBLE'S MOUSE HABITAT
 - A qualified ecologist or landscape architect shall provide a briefing to the contractor prior to ground disturbance to discuss the project and ensure understanding of avoidance and minimization measures. Conservation measures are thoroughly described on page 11-12 of the biological assessment.
 - Construction access in Preble's mouse habitat will be confined to areas identified as impact areas on the plans or by the qualified ecologist or landscape architect.
 - Habitat areas, specifically high-quality Preble's mouse habitat such as dense willow areas, will be identified and impacts to these areas will be fully minimized.
 - No construction staging will be allowed in high-quality Preble's mouse habitat.
 - Preble's mouse habitat adjacent to construction zones will be fenced to prevent construction equipment and other disturbances from occurring in these areas.
 - Access for mitigation work in Preble's Mouse Habitat will be by foot. No ATVs, pickups or large equipment are permitted.
- Follow requirements of all specifications. Review and resolve any discrepancies with the Owners Representative prior to starting work with the USAFA Revegetation and Erosion Control Standards, Sept 2024.
- Contractor and Owner's Representative shall verify the correct location of all underground utilities in the field prior to commencing work.
- Contractor and Owner's Representative shall verify the requirements of the Biological Assessment prior to commencing work.
- Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Owner's Representative for a decision. The Contractor shall assume full responsibility for all necessary revision due to failure to give such notification.
- Construction materials, equipment, fuels, lubricants, and other petroleum distillates should not be stored or stockpiled within 100 horizontal feet of the creek or other aquatic habitats such as ponds and wetlands. Equipment fueling and servicing should occur only within approved designated areas.
- Refer to notes for staking method, soil preparation, plant pit dimensions and backfill requirements.

GENERAL PERFORMANCE MONITORING NOTES

- The objective of monitoring is to ensure that the Preble's mitigation measures have been properly implemented, to evaluate the success of the efforts by identifying issues that could prevent or interfere with the establishment of self-sustaining restoration and enhancement areas, and to suggest remedial activity recommendations to remedy these issues. Monitoring evaluates the status of the restoration and enhancement measures, including plant composition, density, and site hydrology.
- Annual mitigation monitoring will be conducted by El Paso County during the growing season.
 - An annual mitigation monitoring report will be written by El Paso County and submitted by El Paso County to USAFA and USFWS (Project stakeholders or regulators) before December 1 of each year and will extend for five (5) years after completion of the mitigation installation or until Project regulators determine that the success criteria have been met.
 - Problems that could prevent or interfere with the establishment of the mitigation area will be brought to the attention of the Owner, designated oversight team, and Project regulators.
 - The Owner or Project Engineer will review and approve alterations to mitigation area design necessary for successful mitigation.
 - All recommended remedial actions will be communicated to the Owner and designated oversight team and will be implemented after they have been approved by the Project regulators.
 - The Owner and/or designated oversight team will annually assess results of the vegetation monitoring efforts to determine the success of Preble's habitat restoration.
 - Success criteria for the Preble's mouse habitat restoration and mitigation includes:
 - Site preparation for seeding and planting will use a high-quality amendments consistent with the USAFA Revegetation and Erosion Control Standards, September 2024 and the Biological Assessment.
 - Plant Survival shall be in accordance with the USAFA Revegetation and Erosion Control Standards, September 2024.
 - At least 80% of planted shrubs in each planting bed or pod will survive.
 - At least 80% of the willow stakes in each planting bed or pod will survive.
 - 100% of planted trees will survive.
 - Throughout the planted mitigation area, at least 70 percent of the total cover is established with native plant species and growing without showing signs of stress or the continued need for irrigation. This requirement is independent of the stormwater construction permit.
 - Noxious weeds and other invasive species will be controlled in restored and enhanced areas and weed control will be conducted for five years or until it is considered successful when 0 percent of Colorado Department of Agriculture (CDA) designated List A species and less than 5 percent of List B species and 10 percent of list C species are found in overall plant cover from ocular estimates.
 - Final vegetative cover will be consistent with the surrounding undisturbed habitat.

Landscape Cover Sheet

NORTH GATE / STRUTHERS
PWQ POND
LANDSCAPE

Project No./Code

176103

Sheet Number

53 OF 58

As Constructed		NORTH GATE / STRUTHERS PWQ POND LANDSCAPE			Project No./Code	
No Revisions:					176103	
Revised:	Designer: PJM		Structure Numbers	Sheet Number		
	Detailer: PJM			53 OF 58		
Void:		Sheet Subset: Landscape		Subset Sheets: L1		

Print Date: 28 October 2024	
File Name: 24.10.28_STRUTHERS LANDSCAPE.DWG	
Horiz. Scale:	Vert. Scale:
Unit Information	Unit Leader
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Sheet Revisions		
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1. No work should be done when soil is frozen, snow covered, wet, or muddy.
2. Contractor to verify positive drainage in all areas to be planted or seeded.
3. Before soil amendment is imported, placed, and incorporated, till subsoil in areas to be planted and seeded with the Loamy/Clayey Foothills Seed Mix (Upland Mix) to a depth of 12" and in accordance with the USAFA Revegetation and Erosion Control Standards, September 2024.

-

1. Contractor shall provide a 2-year warranty on all plant material, willow stakes, seeding, and workmanship.
2. WARRANTY PERIOD (Landscape Establishment Period)
 - 2.1. The beginning of the warranty period depends upon receipt of the written Notice of Substantial Landscape Completion from the Engineer.
 - 2.2. If the Notice of Substantial Landscape Completion is issued during the spring planting season, the Landscape Establishment period begins immediately and lasts for a period of 24 months. If the Notice of Substantial Landscape Completion is issued at any other time, the Landscape Establishment period begins at the start of the next spring planting season and lasts for a period of 24 months.
3. WARRANTY MAINTENANCE (Landscape Establishment)

During the Warranty/ Landscape Establishment period, the Contractor shall water, cultivate, and prune the plants and repair, replace, or readjust guy material, stakes, and posts as required or directed by the Engineer. Contractor shall reshape plant saucers, repair washouts and gullies, replace lost wood chip mulch, keep all planting sites free from weeds and do other work necessary to maintain the plants in a healthy and vigorous growing condition. This includes seasonal spraying or deep root watering with approved insecticides or fungicides as required. The Contractor shall remove all guying wire, straps, and stakes at the end of the Warranty/Landscape Establishment period.

 - 3.1. PLANTS: Replacement plant material shall be of the same species and size as the stressed, decayed, or dead plant material as the condition is observed.
 - 3.2. WATERING: The contractor will provide a work plan that details how water volume is measured or estimated to ensure each plant receives the specified quantity.
 - 3.2.1. Trees planted shall be watered twice per month by the Contractor at the rate of 30 gallons per tree per watering for the months May through October, and once per month at the rate of 30 gallons per tree for the months November through April of all time following planting and the warranty period.
 - 3.2.2. Shrubs planted in Northgate Boulevard upland area shall be watered twice per month by the Contractor at the rate of 10 gallons per shrub per watering for the months May through October and shall be watered once per month at the rate of 10 gallons per shrub for the months November through April of all time following planting and the warranty period.
 - 3.2.3. Shrubs planted in PMJM habitat areas shall be watered twice per month by the Contractor at the rate of 3 gallons per shrub per watering for the months May through October and shall be watered once per month at the rate of 3 gallons per shrub for the months November through April of all time following planting and the warranty period.
 - 3.3. SEEDED AREAS: The Contractor shall restore and reseed eroded areas and areas of poor establishment per Sections 212 and 213 of the CDOT specifications.
4. Vegetative cover at the end of the warranty period will be consistent with the surrounding undisturbed habitats.
5. During warranty period, Contractor shall mow or cut riparian vegetation in the "permanent impact" areas (the graded areas) to a height of 4-6 inches above the ground during the active season, while Preble's mice are still active and can move away (May-August). This will create a less desirable habitat for hibernation, which usually starts by late September.
6. NOXIOUS WEED CONTROL During the Warranty Period
 - 6.1. Noxious weeds will be controlled by the contractor in all impacted habitat areas until 0 percent of Colorado Noxious Weed Act (Colorado Revised Statutes [CRS] 35-5.5-1011-119) List A species and less than 5 percent of List B or 10 percent of list C species are found in overall plant cover from transects or plot data.
 - 6.2. Noxious weed control will be implemented through the contracted warranty period.

1. All plant material shall conform to the sizes given in the plant list and shall be nursery grown in accordance with the "American Standard for Nursery Stock", latest edition. www.anla.org
2. All planting shall be in accordance with standard American Association of Nurserymen procedures and specifications, and in accordance with the USAFA Revegetation and Erosion Control Standards, Sept 2024.
3. Contractor and Owner's Representative shall verify the correct location of **all** underground utilities in the field prior to installation of any plant materials.
4. Contractor shall be responsible for the safety of those associated with the work, pedestrians and the general public throughout the duration of the contract.
5. Obtain approval from Architect's or Owner's Representative before making any substitutions or changes.
6. Quantities shown on the plant list are for the Contractor's convenience only and are not guaranteed to be accurate. In the event of a discrepancy between quantities shown on the plan and quantities shown on the plant list, the quantities on the plan shall apply.
7. Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the Owner's Representative for a decision. The Contractor shall assume full responsibility for all necessary revision due to failure to give such notification.
8. Contractor is responsible for installing all landscape shown on this plan.
9. **QUALIFIED ECOLOGIST WILL DIRECT AND SUPERVISE ALL PLANTINGS**
 - 9.1. Contractor is responsible for contacting the ecologist or landscape architect for all required inspections. Provide at least 48 hours' notice to schedule inspections.
 - 9.2. After the site has been staked, but prior to clearing, grubbing, and earthwork activities, the contractor, engineer, and ecologist shall walk the site to evaluate and locate existing plant material to be protected and identify plant material that may be salvaged within the designated limits of construction.
 - 9.3. Planting locations will be field fit based on the appropriate hydrology at the time of restoration.
10. No equipment will be allowed in the restoration area immediately following seeding until establishment.
11. The use of chemicals such as soil stabilizers, dust palliatives, herbicides, growth inhibitors, deicing salts, etc., should be in accordance with the manufacturer's recommended application rates, frequency, and instructions. These chemicals should not be used, stored, or stockpiled within 100 horizontal feet of flowing water or other aquatic habitats such as ponds and wetlands.
12. Refer to specifications and notes for staking method, soil preparation, plant pit dimensions and backfill requirements.
13. **WATERING:** Water in newly planted nursery stock and unrooted cuttings in non-irrigated areas. Contractor shall furnish and supply the correct amount of water to the area receiving unrooted cuttings and nursery stock to keep the plants in a healthy and vigorous condition. All plantings shall be watered within four (4) hours of placement. All plant material shown on the plans (excluding seeded areas) shall be watered to ensure successful establishment. Rate of flow shall allow the water to soak into the soil adjacent to the planting. At no time shall watering operations be applied at a rate or intensity that causes surface run off.
14. **MAINTENANCE DURING CONSTRUCTION.** Landscape maintenance and watering shall start immediately upon placement of first permanent landscaping and continue until the Notice of Substantial Landscape Completion has been received. The Contractor shall maintain the seeded areas, nursery stock and unrooted cuttings in a healthy and vigorous growing condition to ensure successful establishment.
15. **CONSTRUCTION TIMING**
 - 15.1. Any trees or shrubs to be removed for the project will be removed during the non-nesting season for migratory birds (between September 1 and March 31)
 - 15.2. Seeding shall be performed in unfrozen ground in accordance with the USAFA Revegetation and Erosion Control Standards, September 2024.
 - 15.3. Planting shall be performed between September 1 and when the ground freezes, and when the ground thaws and May 15.
 - 15.4. Sandbar willow (*Salix exigua*) and peach leaf willow (*Salix amygdaloides*) stakes must be harvested from within the limits of construction or other legally accessible sites nearby while dormant (Nov - after leaf drop to April - prior to bud break).

Landscape Notes

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File Name: 24.10.28_STRUTHERS LANDSCAPE.DWG		Date:	Comments	Init.					No Revisions:					
Horiz. Scale: Vert. Scale:					Revised:		Designer: PJM		Structure		<div style="display: flex; justify-content: space-between;"> <div> <p>Sheet Number</p> <p>54 OF 58</p> </div> <div> <p>L2</p> </div> </div>			
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<div style="display: flex; align-items: center;"> <div style="margin-left: 10px;"> <p>540 Buckeye, Terrace Level Colorado Springs, CO 80919 phone: 719.593.1540</p> </div> </div>					Void:		Sheet Subset: Landscape		Subset Sheets:					

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SEEDING NOTES

1. No work should be done when soils are frozen, snow covered, wet, or muddy.
2. Complete ALL soil amendment and finish grading work prior seeding.
3. After soil amendment, and finish grading is completed in the restoration area, seeding will take place within 48 hours (or sooner as required by the erosion control plan).
4. SEEDING

4.1. Drill seeding will be the required seeding method; however, where terrain doesn't allow drill seeding, hand-broadcast method at double the rate is acceptable.

4.1.1. Prior to seed purchase, all areas to be hand broadcast must be approved by the project ecologist or landscape architect.

4.1.2. In drill seeded areas, grades will be flat to allow for even seeding.

4.1.3. In hand broadcast areas, grades will be rough (plus or minus 3 inches), not smooth or flattened.

4.2. Drill seeding

4.2.1. Seed should be pre-purchased and stored in a cool, dry, rodent free location until ready for use.

4.2.2. All seed bags found onsite should be tagged and labeled. Seed bag tags should have the following information: project name, total pounds pure live seed (PLS), and the scientific names and seeding rate for each species.

4.2.3. Apply an appropriate amount of seed throughout the site using a drill seeding method at the rates specified. Adjust as necessary to ensure even and complete coverage of varied seed sizes.

4.2.4. Adjust drill depth to ensure good seed to soil contact and that most seeds have ~1/4 to ½ inch coverage.

4.3. Hand Broadcast Seeding

4.3.1. Where hand broadcasting is approved, apply an appropriate amount of seed throughout the site using a hand broadcast method at double the drill seed rate, seed bags should be divided into two equal parts prior to application. Similarly, divide the application area into two zones (loosely, or using field measurements). Apply half the stock of seed to the half of the project area carefully, keeping track of percent used vs. percent of area still needing to be covered. Adjust as necessary to ensure even and complete coverage.

4.3.2. After hand-broadcast seeding, rake the area using a sturdy metal bow rake to ensure good seed to soil contact and that most seeds have ~1/4 to ½ inch coverage.

4.3.3. All finished grades will be left rough and natural with soil clods no greater than 3 inches in diameter, no smooth surfaces or straight edges.

4.4. Seeded areas must be delineated (e.g., flagged) for avoidance from heavy equipment.
5. SEEDED AREA MULCHING

5.1. Place erosion control blankets as designated on the civil plans within 24 hours of seeding.

5.2. All areas not covered by erosion control blankets shall be hydromulched with mechanically defibrated virgin wood fiber at a rate of 2,500 lbs/acre with 150 lbs/acre of organic psyllium derived tackifier. Hydromulching must take place within 24 hours of seeding.
6. RECOMMENDED SEED VENDORS

6.1. Arkansas Valley Seed 4333 Hwy. 66 Longmont, CO 80504 (877) 907-3337 www.avseeds.com

6.2. Pawnee Buttes Seed 605 25th St. Greeley, CO 80632 (800) 782-5947 www.pawneebutteseed.com

6.3. Western Native Seed P.O. Box 188 Coaldale, CO 81222 (719) 942-3935 www.westernnativeseed.com

PLANTING NOTES

1. All plant beds and planting areas to be mulched with shredded aspen mulch to a depth of 3" unless otherwise noted on drawings or specifications.
2. LIVE WILLOW STAKE HARVEST AND INSTALLATION

2.1. Sandbar willow (*Salix exigua*) and peach leaf willow (*Salix amygdaloides*) stakes must be harvested from within the limits of construction or other legally accessible sites nearby while dormant (Nov - after leaf drop to April - prior to bud break). All areas for harvest shall be approved by the ecologist prior to cutting and the ecologist will oversee the willow stake harvest operation.

2.1.1. Avoid harvesting and installing crack willow (*Salix fragilis*), which resembles peach leaf willow but is non-native and invasive in Colorado.

2.1.2. When harvesting outside of the limits of construction, remove no more than 20% of the branches from any single willow clump, do not remove more than 30% of the overall canopy cover from any willow stand and harvest stems evenly through the stand.

2.2. Stakes shall be 3-feet in length and ½ to 1 inch diameter at the base. The stem shall be pruned of all branches with the bottom end cut at a 45-degree angle and the top end cut at a 90-degree angle.

2.3. As stakes are cut, the bottom end shall be immediately placed into water. Once harvested, stakes shall be completely submerged in cold water-for at least 72 hours, but not more than 14 days, prior to planting. The storage location shall be shaded to maintain a cold-water temperature. The stakes will be kept wet until placed into the ground and will not be stored out of water for more than 10 minutes prior to planting.

2.4. Stake planting spacing shall be 1.5-foot on center, located 1-2.5 feet above water surface level. Stakes shall be installed to a depth of 24-inches ensuring that the bottom end is placed in or at the top of the water table.

2.5. All cuttings should be trimmed after installation to ensure that no more than 1/4 of their length is left above ground, to avoid unnecessary desiccation (drying).

2.6. Pilot holes should be backfilled by stamping/stepping down around the installed cutting, or pouring a thick mud-slurry mix, to remove any air pockets. Willow "air prune" and will not grow roots if air pockets remain in the pilot hole.

2.7. Willow staking will occur where they have the best chance of survival.
3. CONTAINERIZED PLANT MATERIAL INSTALLATION

3.1. All containerized plant material must be inspected for health, size, and species upon arrival onsite, notify the ecologist at least 3 business days prior to delivery. Alternatively, local nursery inspection of plants may be arranged prior to delivery. Please notify the ecologist at least 3 business days prior to scheduled delivery.

3.2. All plant material should be watered prior to transport and covered during transport. Water plant material once it arrives onsite and store in a shaded location.

3.3. The contractor will mark all planting locations for adjustment and approval by the ecologist prior to installation.

3.3.1. Containerized plantings will occur where they have the best chance of survival.

3.3.2. Planting locations will be field fit based on the appropriate hydrology at the time of restoration.

3.4. When installing shrubs, dig each planting hole 1.5 to 2 times the width of the rootball.

3.5. Shrubs shall be deep planted, when necessary and as plant material size allows to ensure placement of the rootball in the capillary fringe (moist soil) immediately above the water table.

3.6. Per the planting plan, plant 2 species per planting pod (group), with roughly 15-20 containers of each those species, totaling roughly 30-40 plants per planting pod.

3.6.1. Mark the approximate center of each planting pod with a 4' stake - to easily identify the location for watering

3.7. Create watering basins for all shrubs (except willow stakes). All 60 cubic inch (ci) shrub bed watering dishes shall be 3 inches deep by 2 feet in diameter.


3.8. Once planted, all shrubs shall be watered so that the entire rootball and soil around the rootball are inundated. Water thoroughly on the day of planting.

3.9. Shrubs will be watered from time of planting through the warranty period. See Warranty Notes.
4. RECOMMENDED CONTAINERIZED PLANT MATERIAL VENDORS:

4.1. Aquatic and Wetland Nursery Heidi Windell heidi@aquaticandwetland.com Phone: 303-442-4766 ext. "115" <https://aquaticandwetlandnursery.com>

4.2. North Fork Native Plants 1499 South 6000 West Rexburg, ID 83440 Phone: 208-354-3691 info@northforknativeplants.com <http://www.northforknativeplants.com>



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PLANT LIST

QUANTITY SYM SCIENTIFIC NAME COMMON NAME GROWTH FORM SIZE SPACING (O.C.)

PREBLE'S MOUSE HABITAT PLANTINGS near SMITH CREEK

40	af	Amorpha fruticosa	Leadplant	Shrub	60 ci	3'
40	cs	Cornus sericea	Redosier Dogwood	Shrub	60 ci	3'
40	pa	Prunus americana	American Plum	Shrub	60 ci	3'
60	pv	Prunus virginiana	Chokecherry	Shrub	60 ci	3'
40	ra	Ribes aurem	Golden Currant	Shrub	60 ci	3'
40	rw	Rosa woodsii	Woods' Rose	Shrub	60 ci	3'
10	sa	Salix amygdaloides	Peach leaf willow	Stakes	36" long	10'
850	se	Salix exigua	Sand bar willow	Stakes	36" long	3'
60	so	Symphoricarpos occidentalis	Western Snowberry	Shrub	60 ci	3'

O.C. = On center; ci = Cubic inch; A 60 ci Deepot 60 = 2.5" diameter x 14"deep

NORTH GATE BOULEVARD PLANTING

20	ac	Amorpha canescens	Silvery Leadplant	Shrub	5 gal	3'
9	cm	Cercocarpus montanus	Mountain Mahogany	Shrub	5 gal	4'
29	en	Ericameria nauseosa	Rubber Rabbitbrush	Shrub	5 gal	3'
			(Chrysothamnus nauseosus)			
8	fp	Fallugia paradoxa	Apache Plume	Shrub	5 gal	5'
2	JS	Juniperus scopulorum	Rocky Mountain Juniper	Tree	5 gal	8'
6	PE	Piñon Pine	Pinus edulis	Tree	5 gal	15'
3	PP	Pinus ponderosa	Ponderosa Pine	Tree	5 gal	30'
14	pb	Prunus besseyi	Western Sandcherry	Shrub	5 gal	4'
59	rt	Rhus trilobata	Skunkbush Sumac	Shrub	5 gal	3'
7	rc	Ribes cereum	Wax Currant	Shrub	5 gal	3'
26	wrw	Rosa woodsii	Western Wild Rose	Shrub	5 gal	3'
13	QG	Quercus gambelii	Gambel Oak	Tree	5 gal	12'
12	yg	Yucca glauca	Plains Yucca	Shrub	5 gal	2'

SEEDING MIXES

Table 3: Riparian Seed Mix

Riparian Mix						
Scientific Name	Variety*	Common Name	PLS lbs/ac	% by Weight	PLS/sq ft	% of PLS/sq ft
Graminoids						
Carex nebrascensis	vns.	Nebraska sedge	1.50	4	18	12
Distichlis spicata	vns.	inland saltgrass	1.20	3	14	9
Elymus canadensis	vns.	Canada wildrye	6.30	16	17	11
Elymus lanceolatus ssp. lanceolatus	vns.	thickspike wheatgrass	4.00	10	14	9
Elymus trachycaulus	San Luis or White River	slender wheatgrass	3.00	8	11	7
Juncus arcticus ssp. littoralis	vns.	mountain rush	0.06	0	15	10
Panicum virgatum	vns.	switchgrass	3.00	8	18	11
Pascopyrum smithii	Arriba	western wheatgrass	1.00	3	3	2
Sporobolus airoides	Salado	alkali sacaton	0.25	1	10	6
Sporobolus cryptandrus	vns.	sand dropseed	0.08	0	10	6
Triticum aestivum x Secale cereale	vns.	Quickguard	10.00	26	3	2
Graminoid Totals			30.39	78	133	85
Forbs						
Asclepias speciosa	vns.	showy milkweed	4.50	12	7	5
Cleome serrulata	vns.	Rocky Mountain beeplant	3.00	8	5	3
Helianthus maximiliani	vns.	Maxmilian sunflower	0.90	2	4	3
Rudbeckia hirta	vns.	blackeyed susan	0.12	0	5	3
Verbena hastata	vns.	swamp verbena	0.08	0	3	2
Forb Totals			8.60	22	24	15
Total			38.99	100	157	100

*vns. = variety not specified

Table 5: Loamy/Clayey Foothills Seed Mix (UPLAND MIX)

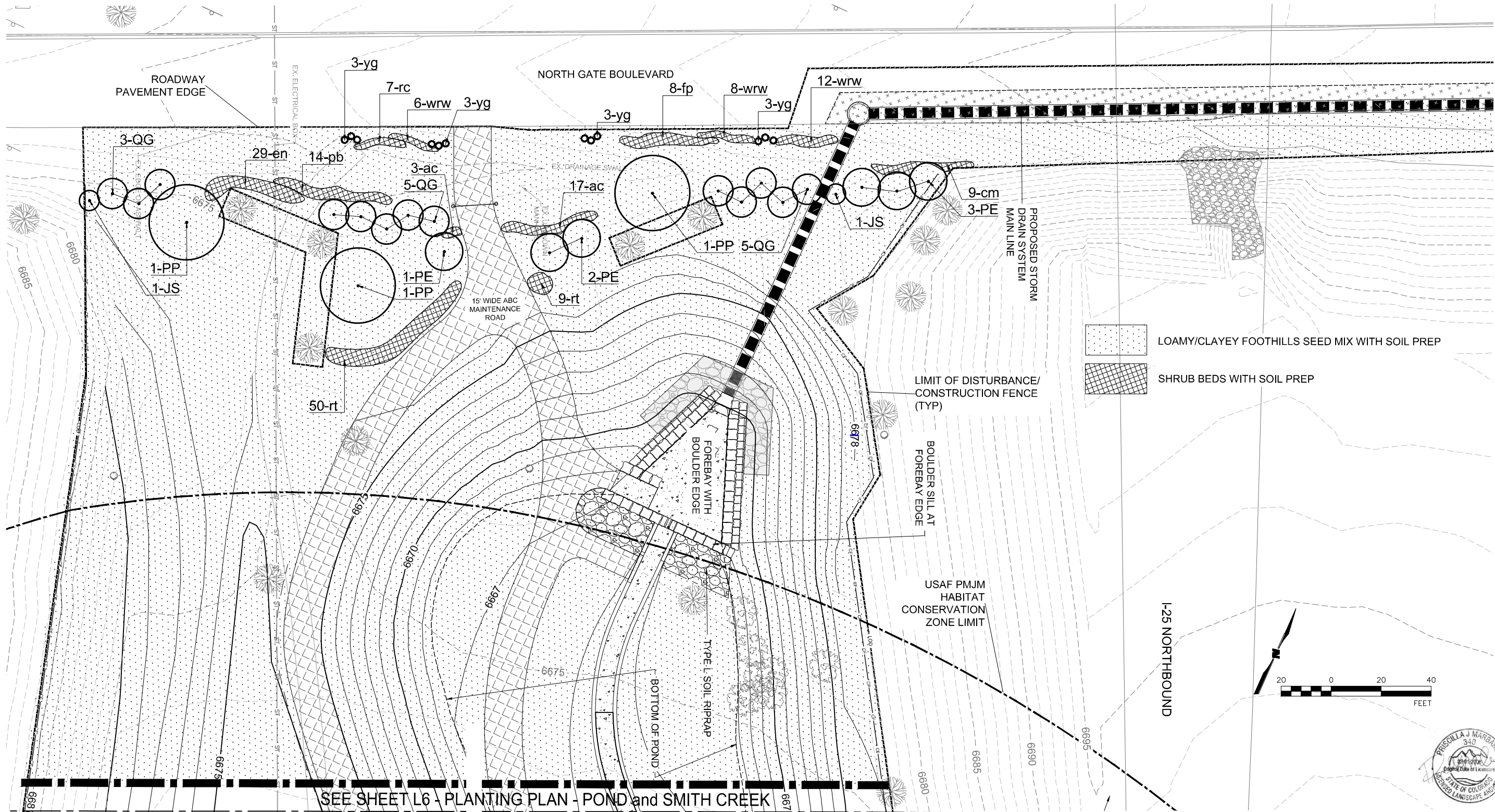
Loamy/Clayey Foothills Mix						
Scientific Name	Variety*	Common Name	PLS lbs/ac	% by Weight	PLS/sq ft	% of PLS/sq ft
Graminoids						
Andropogon gerardii	vns.	big bluestem	2.00	4	6	4
Bouteloua curtipendula	vns.	sideoats grama	3.20	6	14	10
Bouteloua dactyloides	vns.	buffalograss	7.20	14	9	6
Bouteloua gracilis	CO Native	blue grama	0.85	2	16	11
Elymus elymoides	vns.	bottlebrush squirreltail	2.50	5	11	8
Hesperostipa comata ssp. comata	vns.	needle and thread	2.60	5	7	5
Koeleria macrantha	Sims Mesa	prairie junegrass	0.29	1	15	11
Nassella viridula	vns.	green needlegrass	3.10	6	13	9
Pascopyrum smithii	Arriba	western wheatgrass	6.50	13	16	11
Schizachyrium scoparium	Cimarron	little bluestem	2.00	4	12	8
Triticum aestivum x Secale cereale	vns.	Quickguard	15.00	30	5	3
Graminoid Totals			45.24	90	125	85
Forbs						
Artemisia frigida	vns.	prairie sagewort	0.03	0	3	2
Dalea purpurea var. purpurea	vns.	purple prairie clover	1.20	2	6	4
Ratibida columnifera	vns.	upright prairie coneflower	0.30	1	5	3
Sphaeralcea coccinea	vns.	scarlet globemallow	0.50	1	6	4
Vicia americana	vns.	American vetch	3.00	6	2	2
Forb Totals			5.03	10	22	15
Total			50.27	100	147	100

*vns. = variety not specified

Print Date: 28 October 2024	<div><div></div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			Plant List and Details				Project No./Code	
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PLANTING PLAN - NORTH GATE BOULEVARD and POND

1" = 20'-0"

Print Date: 28 October 2024	<div><div></div><div></div><div></div><div></div></div>
File Name: 24.10.28_STRUTHERS LANDSCAPE.DWG	
Horiz. Scale: Vert. Scale:	
Unit Information Unit Leader	
<div><div>TAPIS</div><div>associates</div></div> 540 Buckeye, Terrace Level Colorado Springs, CO 80919 phone: 719.593.1540	

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Date:	Comments	Init.



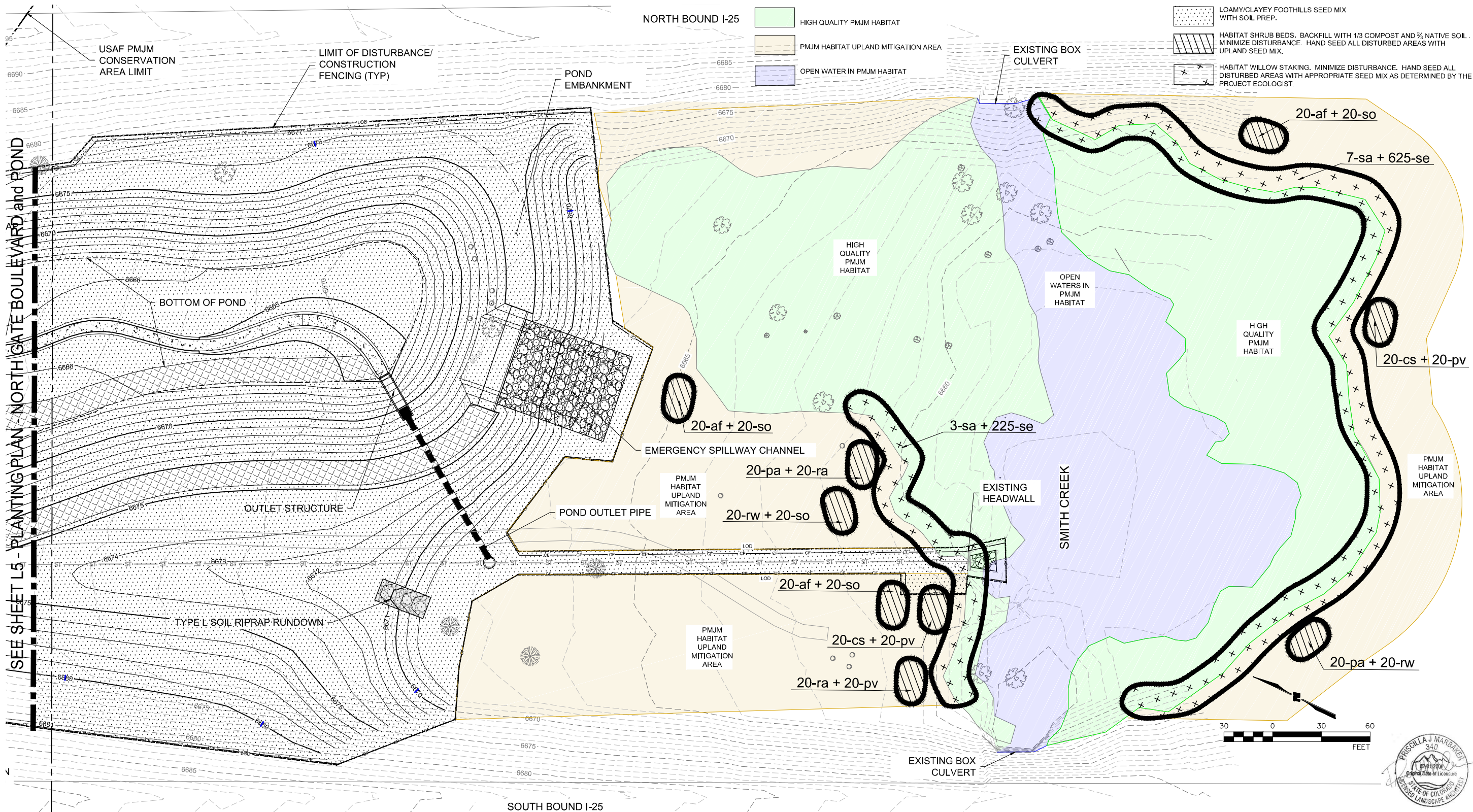
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No Revisions:		Designer: PJM	Structure Numbers	176103
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Void:		Sheet Subset: Landscape	Subset Sheets: L5	

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PLANTING PLAN - POND and SMITH CREEK

1" = 20'-0"

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