27-INCH INTERCEPTOR CONNECTION TO DOE BRANCH TRUNK SEWER ~ PHASE ONE SOUTHEAST SECTOR (PWK SEW 2014-06)

JUNE 2015

CITY OF CELINA
ENGINEERING DEPARTMENT
RELEASED FOR CONSTRUCTION
DATE 10/5/2015 BY

PRIOR TO CONSTRUCTION, THE OWNER OR THEIR REPRESENTATIVE SHALL NOTIFY THE CITY OF CELINA ENGINEERING DEPARTMENT AT 972-382-2682 x1081. CONSTRUCTION DRAWINGS STAMPED BY THE CITY OF CELINA SHALL BE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION. THE CITY OF CELINA STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL TAKE PRECEDENCE OVER THESE PLANS WHENEVER IN CONFLICT THEREWITH. DISCLAIMER: ALL NECESSARY APPROVALS AND PERMITS SHALL BE ACQUIRED PRIOR TO CONSTRUCTION.

MAYOR
SEAN TERRY

MAYOR PRO TEM
CARMEN ROBERTS

CITY COUNCIL

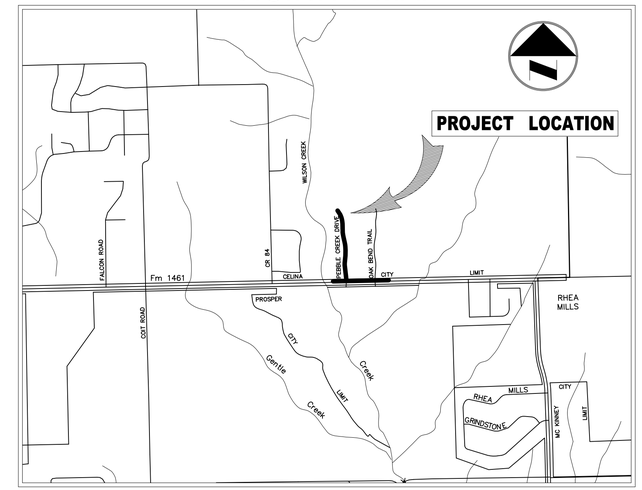
ERIK GEIGER
WAYNE NABORS
ANDY HOPKINS
CARMEN ROBERTS
LORI VADEN
CHAD ANDERSON

CITY MANAGER
MIKE FOREMAN

CITY ENGINEER
GABE JOHNSON, P.E., P.H., CFM

STATE OF TEXAS
CURTIS S. CALDWELL
66178
REGISTERED
PROFESSIONAL ENGINEER
6-2-2015

VICINITY MAP



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Pacheco Koch
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TX REG. ENGINEERING FIRM F-14439
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PH. 972.235.3031
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PK FILE: 3551-14.141

PHASE 1

INTERCEPTOR CONNECTION TO DOE BRANCH TRUNK SEWER

SS-201411-01

GENERAL PROJECT NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, 4TH EDITION AS AMENDED BY THE CITY OF CELINA. THE CONTRACTOR SHALL REFERENCE THE LATEST CITY OF CELINA STANDARD DETAILS PROVIDED IN THE CELINA PUBLIC WORKS DEPARTMENTS "STANDARDS OF DESIGN AND CONSTRUCTION" MANUAL FOR DETAILS NOT PROVIDED IN THESE PLANS. THE CONTRACTOR SHALL POSSESS ONE SET OF THE N.C.T.C.O.G. STANDARD SPECIFICATIONS AND DETAILS AND THE CITY OF CELINA'S "STANDARDS OF DESIGN AND CONSTRUCTION" MANUAL ON THE PROJECT SITE AT ALL TIMES. IN THE EVENT OF A CONFLICT WITH N.C.T.C.O.G., THE DESIGN ENGINEER SHALL BE NOTIFIED TO PROVIDE CLARIFICATION.

2. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL BE FAMILIAR WITH THE PLANS, ALL NOTES, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, THE CITY STANDARDS FOR CONSTRUCTION, AND ANY OTHER APPLICABLE STANDARDS AND SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BE FAMILIAR WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY OF PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.

3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. CONTRACTOR SHALL VERIFY THAT NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSINGS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEANOUTS, VALVE BOXES, AND FIRE HYDRANTS, ETC.. CONTRACTOR TO ADJUST TO PROPER LINE AND GRADE PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING THE CONSTRUCTION OF THE PAVING FOR THIS PROJECT.

5. PROTECT AND MAINTAIN ROADWAY TRAFFIC THROUGHOUT THE PROJECT, PROVIDING A MINIMUM OF ONE (1) LANE OPEN IN EACH DIRECTION.

6. PROVIDE AND MAINTAIN INTERIM ACCESS FROM ROADWAYS CURRENTLY IN USE TO ALL DRIVEWAYS AND INTERSECTING STREETS OR ALLEYS. THE CONTRACTOR SHALL PROVIDE ACCESS AT ALL TIMES DURING CONSTRUCTION TO ALL LOCAL RESIDENTS, BUSINESSES, MAIL SERVICE, AND TRASH PICK UP.

7. MAINTAIN NORMAL PROJECT DRAINAGE UNTIL NEW DRAINAGE FACILITIES ARE FUNCTIONAL, INCLUDING, WHERE NECESSARY, INTERIM REPLACEMENT OF EXISTING DRAINAGE STRUCTURES REMOVED FOR CONSTRUCTION OF NEW DRAINAGE FACILITIES.

8. MAINTAIN ALL WORK AND MATERIAL STORAGE AREAS IN ORDERLY CONDITION, FREE OF DEBRIS AND WASTE. ON COMPLETION OF CONSTRUCTION, CLEAN UP THE PROJECT AND ADJACENT AFFECTED AREAS TO ACCEPTABLE CONDITION, ALL AS PROVIDED IN THE GENERAL CONDITIONS.

9. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING TRENCH SAFETY. ENTRANCE LAYOUTS, RAMPS, LANDSCAPE, AND SIDEWALKS.

10. EXACT SAWCUT PAVEMENT REMOVAL AND REPLACEMENT LIMITS WITHIN THE PUBLIC RIGHT-OF-WAY IS TO BE APPROVED BY PROJECT REPRESENTATIVE.

11. A SITE SPECIFIC TRENCH SAFETY PLAN SHALL INCLUDE A PLAN FOR EACH BORE PIT.

12. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL ERECT A TEMPORARY SECURITY FENCE AT ALL EXCAVATIONS.

13. ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS THROUGHOUT THE CONSTRUCTION. ANY AND ALL EXCAVATIONS NEAR TRAVEL LANES OR DRIVEWAYS SHALL BE COVERED WITH TRAFFIC-SUPPORTING METAL PLATES OR BACKFILLED AND TOPPED WITH TEMPORARY ASPHALT PAVEMENT UNTIL PERMANENT CONCRETE PAVEMENT IS REPLACED. METAL PLATES SHALL BE BEDDED ON TEMPORARY PAVEMENT MATERIAL AND SHIMMED TO PREVENT MOVEMENT. BEDDING SHALL BE TAPERED ON ALL SIDES TO PROVIDE SMOOTH TRANSITION FOR ALL USERS. AN ADVANCE WARNING SIGN SHALL BE USED TO IDENTIFY THE PRESENCE OF A PLATE.

14. FINISHED GROUND SHALL HAVE NO MORE ROCKS OVER 1 INCH THAN SURROUNDING UNDISTURBED GROUND. ALL ROCK LARGER THAN 1 INCH SHALL BE COLLECTED AND DISPOSED OF BY THE CONTRACTOR.

15. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SERVICE LINES CROSSED OR EXPOSED BY HIS CONSTRUCTION OPERATIONS. WHERE EXISTING SERVICE LINES ARE CUT, BROKEN, OR DAMAGED. THE CONTRACTOR SHALL IMMEDIATELY REPLACE THE SERVICE LINES WITH THE SAME TYPE OF ORIGINAL CONSTRUCTION, OR BETTER TYPE OF ORIGINAL CONSTRUCTION, OR BETTER.

16. UTILITY OWNERS SHALL DETERMINE IF, WHEN AND WHICH UTILITY OR LIGHT POLES (IN THE VICINITY OF PROPOSED CONSTRUCTION) HAVE A NEED FOR ADDITIONAL SUPPORT. ONCE THE UTILITY OWNER MAKES THE DECISION AS TO WHETHER OR NOT UTILITY POLES AND LIGHT STANDARDS/POLES (NEAR EXCAVATION) REQUIRE ADDITIONAL SUPPORT, THE CONTRACTOR SHALL PROVIDE FOR SUPPORT OF SAID POLE OR LIGHT (NO PAY).

17. TEMPORARY FENCING SHALL BE REQUIRED WHERE THERE IS EVIDENCE OF LIVESTOCK AND WHERE DAMAGED OR REMOVED FENCES ARE NOT TO BE REPLACED BY THE END OF THE SAME WORK DAY. TEMPORARY FENCING SHALL BE CONSTRUCTED TO PROVIDE THE SAME LEVEL OF SECURITY AS THE ORIGINAL PERMANENT FENCING.

18. CONTRACTOR SHALL RESET ALL IRON RODS AND OTHER PROPERTY MARKERS DISTURBED BY CONSTRUCTION (NO SEPARATE PAY ITEM.)

19. CONTRACTOR SHALL PROTECT EXISTING CONCRETE PAVEMENT FROM TRACKED EQUIPMENT.

20. PAVEMENT REMOVAL AND REPLACEMENT SHOWN ON PLANS REFLECT ALLOWABLE TRENCH WIDTH. PAVEMENT REPLACEMENT SHALL BE PAID AS PROVIDED FOR IN THE PROPOSAL AND BID SCHEDULE. ALL DRIVEWAYS ARE TO BE RETURNED TO ORIGINAL OR BETTER CONDITION.

21. DAMAGED IRRIGATION SYSTEMS SHALL BE REPAIRED OR REPLACED TO THE PROPERTY OWNER'S SATISFACTION (NO SEPARATE PAY ITEM). CONTRACTOR SHALL IMMEDIATELY REPAIR DAMAGE TO UNDERGROUND SPRINKLER SYSTEMS. ALL REPAIRS SHALL BE COMPLETED BY AN IRRIGATOR LICENSED IN THE STATE OF TEXAS.

22. BACKFILL FOR ALL BORE PITS SHALL BE PLACED IN 8-INCH LOOSE LIFTS (LOOSE MEASUREMENT) AND BE MECHANICALLY COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698 AT OPTIMUM MOISTURE PLUS OR MINUS TWO POINTS.

23. REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATION OF ALL KNOWN UNDERGROUND UTILITIES AND SERVICE LINES. HOWEVER, THE OWNER ASSUMES NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL EXISTING SUBSURFACE UTILITIES OR UTILITY LINES, OR TO SHOW THEM IN THEIR EXACT LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES, SERVICE LINES OR THE LIKE, WHICH ARE CROSSED OR EXPOSED BY THE CONSTRUCTION OPERATION.

24. CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT IF IT IS NECESSARY TO CHANGE OR MOVE UTILITY, THE PROGRESS OF THE WORK WILL NOT BE DELAYED.

25. ANY FENCE REMOVED FOR CONVENIENCE OF CONSTRUCTION SHALL BE REPLACED OR RECONSTRUCTED. NEW MATERIALS SHALL MATCH EXISTING FENCES. WOOD FENCES SHALL BE REPLACED WITH NEW CEDAR WITH THE POSTS MATCHING THE EXISTING POSTS.

26. THE CONTRACTOR SHALL REPLACE ALL SHRUBS, PLANTS, TREES, ETC. THAT ARE REMOVED FOR CONVENIENCE OF CONSTRUCTION AT HIS EXPENSE. NEW SHRUBS, PLANTS, TREES, ETC. SHALL BE EQUAL TO OR BETTER THAN THE EXISTING ONES OR MEET THE NEEDS AND APPROVAL OF THE PROPERTY OWNER AND THE PROJECT REPRESENTATIVE.

27. THE CONTRACTOR SHALL NOT DISPOSE OF WASTE AND ANY MATERIALS INTO STREAMS OR WATERWAYS. THE CONTRACTOR SHALL SECURE ALL EXCAVATION AT THE END OF EACH DAY AND DISPOSE OF ALL EXCESS MATERIALS. DISPOSAL SITE SHALL BE DOCUMENTED AND PROVIDED TO THE PROJECT REPRESENTATIVE.

28. THE CONTRACTOR SHALL OBTAIN TPDES STORM WATER PERMIT, POST ALL PERMITS ON THE CONSTRUCTION SITE, SUBMIT A NOTICE OF INTENT (NOI) AND SUBMIT A NOTICE OF TERMINATION (NOT). THE CONTRACTOR AND HIS SUB -CONTRACTORS SHALL BE THE SOLE OPERATOR AND PERMITTEES OF THE CONSTRUCTION SITE.

29. CONTRACTOR SHALL GRADE GROUND AND DITCHES DISTURBED BY CONSTRUCTION TO PREVENT PONDING OF STORM WATER RUNOFF. GRADING SHALL BE SUBSIDIARY TO THE PROJECT BID ITEMS.

30. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE COVERED WITH TOPSOIL. TOPSOIL SHALL BE STOCKPILED, REPLACED AND DISC HARROWED TO A MINIMUM DEPTH OF 4-INCHES.

31. CONTRACTOR SHALL RESTORE GRASS AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH GRASS COMPARABLE TO EXISTING. PROJECT REPRESENTATIVE SHALL DIRECT LIMITS AND TYPE OF RESTORATION. RESTORE ESTABLISHED LAWN AREAS, INCLUDING EASEMENTS AND PARKWAYS BY SODDING. RESTORE GRASS AREAS ALONG ALIGNMENT NOT REQUIRING SODDING USING HYDROMULCH METHOD. REEASTBLISHED AREAS SHALL BE WATERED, FERTILIZED AND MAINTAINED FOR A PERIOD NOT LESS THAN FOUR WEEKS, OR AS REQUIRED TO ESTABLISH AN ACCEPTABLE LAWN.

32. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE ALL NECESSARY TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

GENERAL PROJECT NOTES

33. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ALL NECESSARY PERMITS, LICENSES, ETC.

34. THE OWNER'S ENGINEER WILL PERFORM CERTAIN CONSTRUCTION STAKING. REFERENCE THE CONSTRUCTION DOCUMENTS, WHICH OUTLINE THE SCOPE OF THIS SERVICE.

35. IT WILL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LINE LOCATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY TO THOSE COMPANIES FOR ANY DAMAGES CAUSED TO THEIR FACILITIES.

CITY OF CELINA, GENERAL INFORMATION	(972) 382-2682
COSERV	(800) 274-4014
UPPER TRINITY REGIONAL WATER DISTRICT	(972) 219-1228
GTE TELECOMMUNICATIONS	(800) 344-8377
TXU ELECTRIC	(817) 992-6204
ATMOS ENERGY (FIELD ENGINEER ROBIN RICHARDSON)	(972) 485-6204

36. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS ONTO ADJACENT DEVELOPED OR UNDEVELOPED PROPERTY AREAS WILL BE ALLOWED UNLESS SPECIFIED IN THE PLANS. ANY DAMAGE RESULTING THEREFROM SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR.

37. OTHER CONSTRUCTION MAY BE UNDERWAY AT THE SAME TIME AND IN THE GENERAL AREA OF THE SUBJECT PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY AND COORDINATE WITH OTHER CONTRACTORS TO DETERMINE A CONSTRUCTION SCHEDULE THAT WILL OFFER THE LEAST HINDRANCE TO ALL INVOLVED. THE OWNER'S ENGINEER WILL BE NOTIFIED OF ALL COORDINATION. IN THE EVENT OF A SCHEDULING CONFLICT THE OWNER'S ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

38. CONSTRUCTION INSPECTION WILL BE PERFORMED BY REPRESENTATIVES OF THE OWNER, ENGINEER, GEOTECHNICAL ENGINEER, AND REVIEWING AUTHORITIES AND AGENCIES. UNRESTRICTED ACCESS SHALL BE PROVIDED TO THEM AT ALL TIMES. CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING AND SCHEDULING REQUIRED INSPECTIONS.

39. SIGNS ALONG ROUTE REMOVED FOR CONVENIENCE OF CONSTRUCTION SHALL BE REESTABLISHED AFTER COMPLETION OF BACKFILLING IN THAT AREA (NO SEPARATE PAY ITEM).

GENERAL NOTES FOR SANITARY SEWER CONSTRUCTION

1. ALL NON-PRESSURE TYPE MANHOLES ARE TO BE CONSTRUCTED WITH A MINIMUM OF 2 - PRECAST CONCRETE GRADE RINGS AND WITH AN INTERNAL CHIMNEY SEAL. THE MAXIMUM ALLOWABLE EXTENSION OF MANHOLE NECKS USING GRADE RINGS IS LIMITED TO 30".

2. ALL MANHOLES ARE TO HAVE INVERTS CONSTRUCTED PER MISCELLANEOUS DETAILS.

3. ALL SANITARY SEWER MAIN STUBOUTS FROM MANHOLES SHALL BE A MINIMUM OF 5 FEET IN LENGTH AND TERMINATED WITH A WATER TIGHT STOPPER OR CAP.

4. FOR ALL MANHOLES WITH CAST IN PLACE BASES, THE FIRST PIPE JOINT MUST EXTEND MINIMUM OF 5 FEET PAST THE EDGE OF MANHOLE, WITH A CONCRETE CRADLE POURED INTEGRALLY WITH THE BASE, AND UNDER THE ENTIRE PIPE JOINT LENGTH.

5. ALL CAST IN PLACE MANHOLES ARE TO BE CONSTRUCTED WITH PIPE TO MANHOLE CONNECTORS PER MISCELLANEOUS DETAILS, OR WITH A CONNECTOR AS APPROVED BY THE OWNER'S PROJECT REPRESENTATIVE.

6. MINIMUM MANHOLE WALL THICKNESS ARE PER ASTM C76-08a AS FOLLOWS: THE STANDARD THICKNESSES ARE: 48" MANHOLE-5" WALL; 60" MANHOLE-6" WALL; 72" MANHOLE-7" WALL. REFER TO MISC DETAILS FOR ADDITIONAL INFORMATION.

LEGEND

B.	BOLLARD	TELE	TELEPHONE BOX
EM	ELECTRIC METER		FLOOD LIGHT
PP	POWER POLE	FP	FLAG POLE
LS	LIGHT STANDARD	SIGN	TRAFFIC SIGN
WM	WATER METER	IRS	1/2-INCH IRON ROD W/"PACHECO KOCH" CAP SET
WV	WATER VALVE	(C.M.)	CONTROLLING MONUMENT
ICV	IRRIGATION CONTROL VALVE		PROPERTY LINE
FH	FIRE HYDRANT	x	FENCE
CO	CLEANOUT	OHL	OVERHEAD UTILITY LINE
MH	MANHOLE	#	COORDINATE DESIGNATION
TSC	TRAFFIC SIGNAL CONTROL		PROPOSED FENCE
TSP	TRAFFIC SIGNAL POLE		

STATE OF TEXAS
CURTIS S. CALDWELL
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8350 N. CENTRAL EXPWY. SUITE 1000
DALLAS, TX 75206 972.235.3031
TX REG. ENGINEERING FIRM F-14439
TX REG. SURVEYING FIRM LS-101938-05

GENERAL NOTES

27" SEWER INTERCEPTOR
SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	2

BID ITEM #	BID ITEM	SPEC	UNITS	SHEET 3	SHEET 4	SHEET 5	SHEET 6	SHEET 7	SHEET 8	TOTAL	PROPOSAL QUANTITY
1	Mobilization, Demobilization, Bonds, Insurance	TxDOT 500	LS							1	1
2	Traffic Control & Barricades	TxDOT 502	LS							1	1
3	Project Sign	107.2	EA							2	2
4	Temporary Erosion, Sedimentation and Water Pollution Prevention (SWPPP)	201	LS							1	1
5	General Site Preparation	203.3	LS							1	1
6	60" Diameter Sanitary Sewer Manhole	Tech Spec	EA	2	2	2	3			9	9
7	Sanitary Sewer Drop Connection	Tech Spec	EA		1					1	1
8	48" Diameter Sanitary Sewer Manhole	Tech Spec	EA					1	1	2	2
9	60" Diameter Sanitary Sewer Manhole Extra Depth	Tech Spec	VF	14	39	25	45			124	124
10	48" Diameter Sanitary Sewer Manhole Extra Depth	Tech Spec	VF					3	9	12	12
11	27" PVC (F679 PS115) Sanitary Sewer Main	501.17	LF	241						241	241
12	27" Sanitary Sewer Main (BOTOC)	Tech Spec	LF	242	900	900	515			2557	2557
13	12" Sanitary Sewer Main (BOTOC)	Tech Spec	LF					900	273	1173	1173
14	Vacuum Test Sanitary Sewer Manhole	Tech Spec	EA	2	3	2	3	1	1	12	12
15	Television Inspection	507.5	LF	483	900	900	515	900	273	3971	3971
16	6" PVC (DR 14) Water Main	506	LF							0	200
17	8" PVC (DR 14) Water Main	506	LF							0	200
18	Connect to Existing Water	506	EA							0	8
19	Remove 8" Reinforced Concrete Pavement	203.3	SY		222	222	200			644	750
20	8" Reinforced Concrete Pavement (3600 psi)	303	SY		222	222	200			644	750
21	Rock Foundation	504.3	CY							0	20
22	Sand Backfill	504.6	CY							0	20
23	Hydromulch Seeding of Work Zone	202	SY		111					111	150
24	Sod (to Match Existing) w/4" Topsoil	202	SY		560	160	360	400	200	1680	1800
25	Trench Safety & Support	107.19	LF	241						241	241
26	Full Depth Concrete Pavement Saw Cut	402.2	LF		100	100	100			300	350
27	Investigation	Tech Spec	EA							5	5
28 1	Temporary Paving	302.9	SY	94	127	47				268	300
29 2	Sanitary Sewer Manhole Vent	Tech Spec	EA				1			1	1
30	4" Sanitary Sewer Service Manhole Tap w/Inside Drop	Tech Spec	EA				1			1	1

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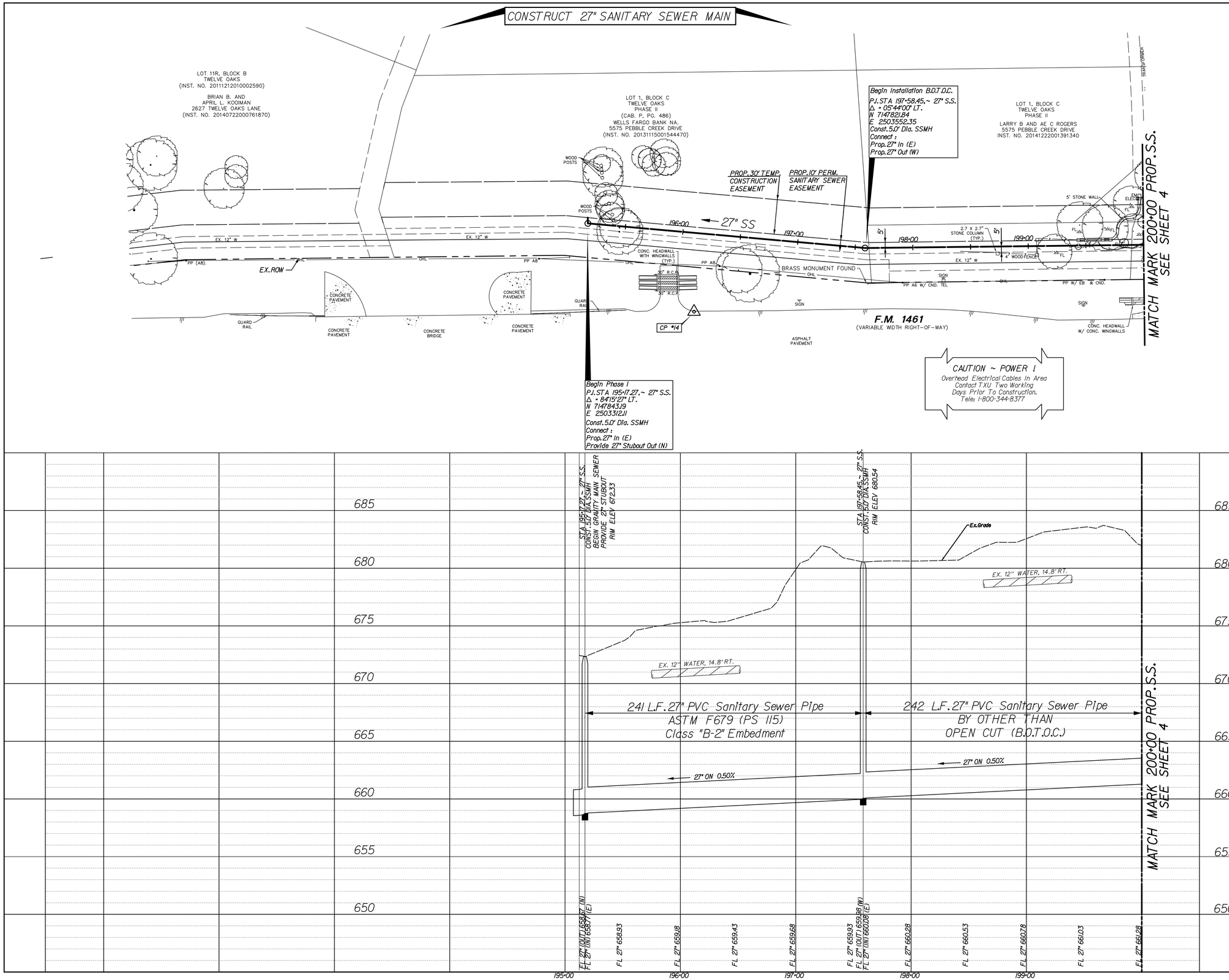
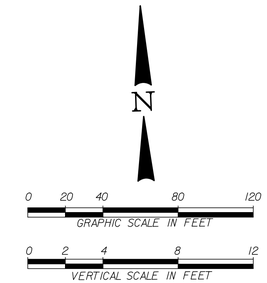
QUANTITY SHEET

27" SEWER INTERCEPTOR
SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	2A





Point	Northing	Easting	Elev.	Description
13	7147782.62	2503872.16	680.82	1/2"-IRON SET W/RED CAP
14	7147766.65	2503404.16	678.38	PK NAIL SET

STATE OF TEXAS
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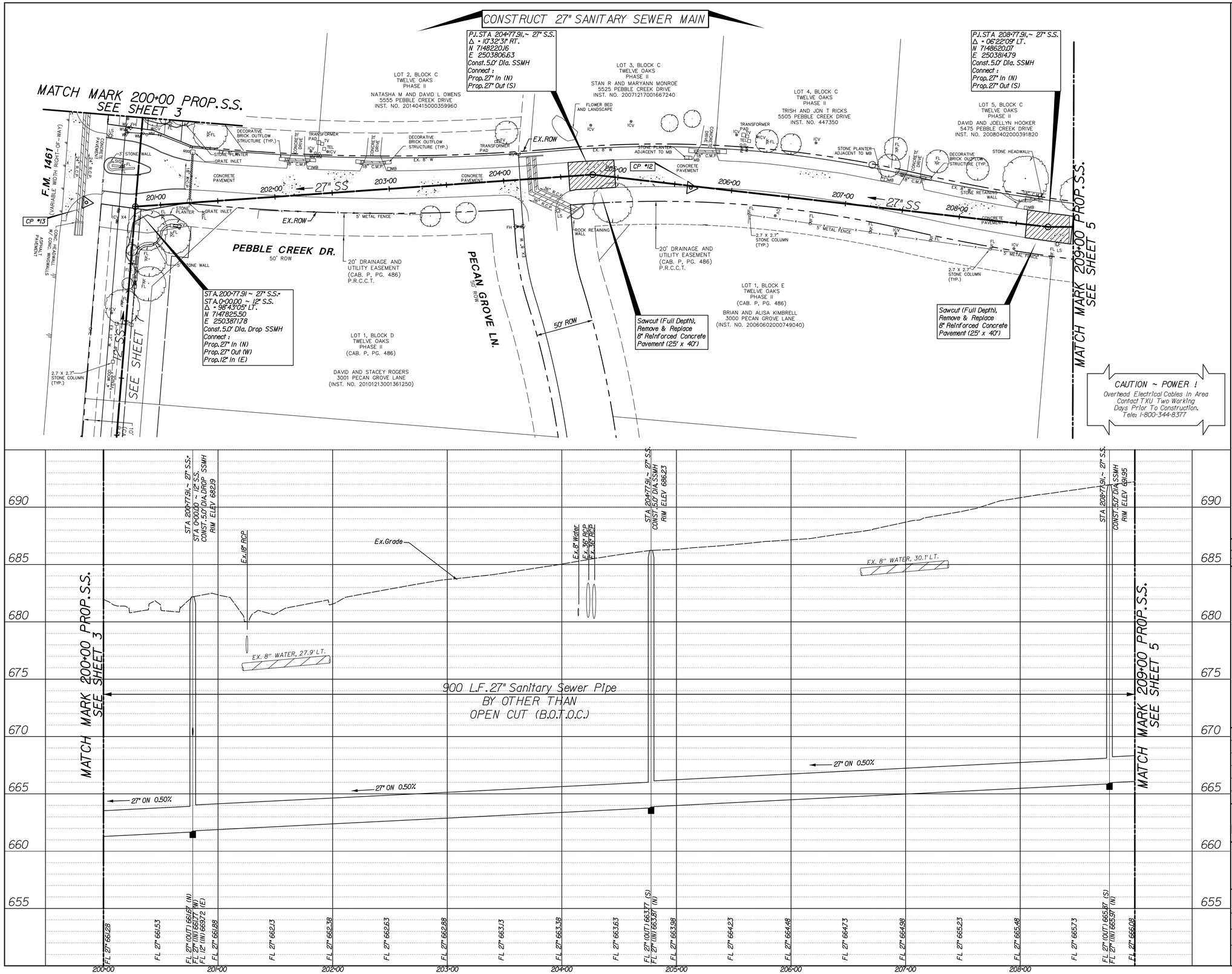
INTERCEPTOR MAIN PLAN & PROFILE STA. 195+17.27 TO STA. 200+00

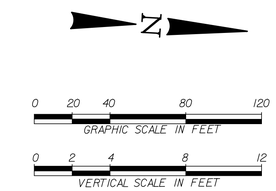
27" SEWER INTERCEPTOR SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	3

SS-201411-01





NOTE:
1. Provide and maintain working access from roadways to all driveway and intersectioning streets. The contractor shall provide access at all times to all local residents, mail service and trash pick up.

Point	Northing	Easting	Elev.	Description
12	7148306.54	2503810.09	686.81	1/2"-IRON SET W/RED CAP
13	7147782.62	2503872.16	680.82	1/2"-IRON SET W/RED CAP

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INTERCEPTOR MAIN PLAN & PROFILE STA. 200+00 TO STA. 209+00

27" SEWER INTERCEPTOR SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	4

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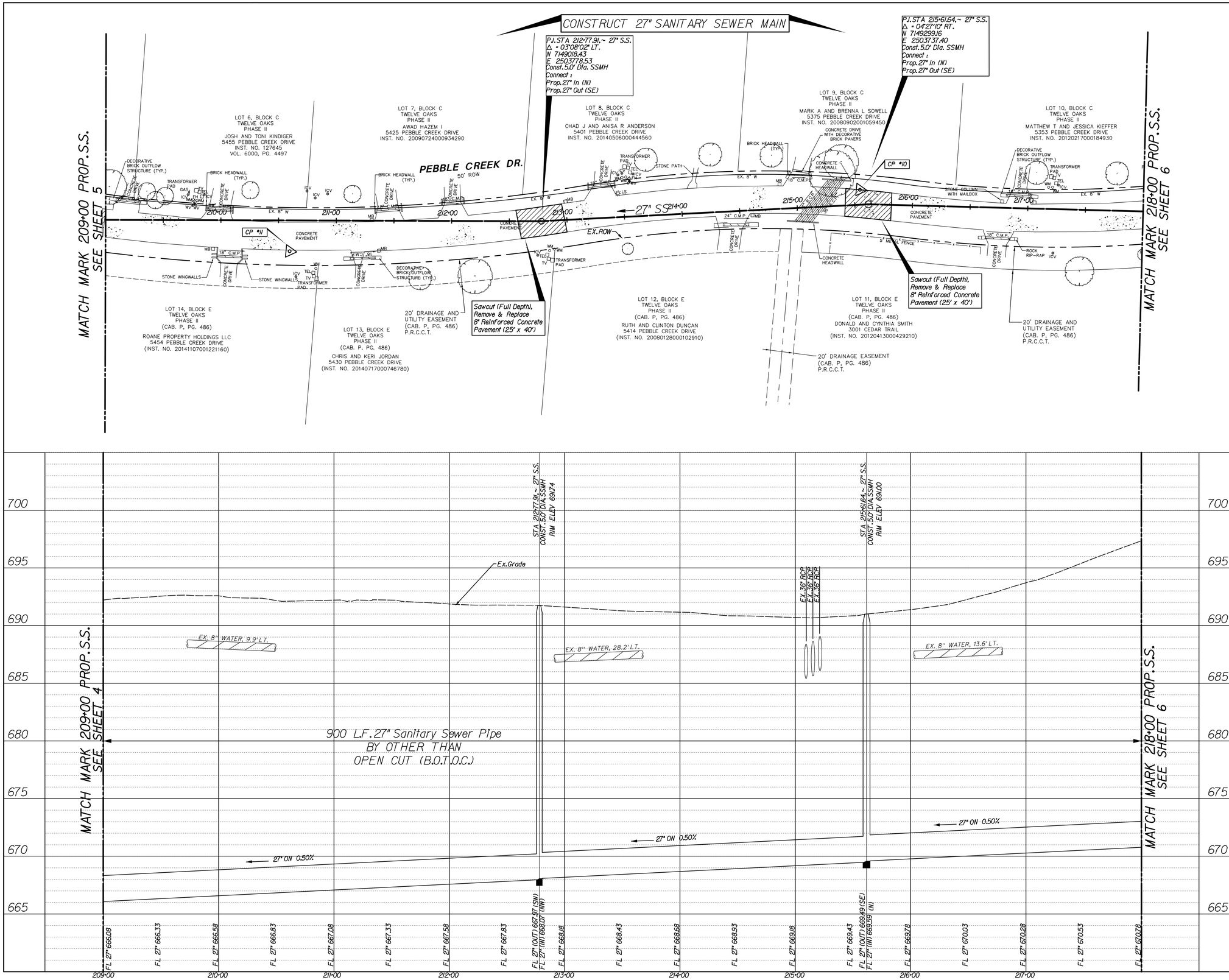

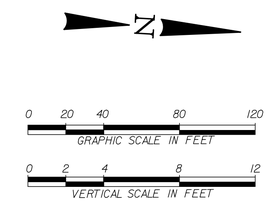

NOTE:
1. Provide and maintain working access from roadways to all driveway and intersectioning streets. The contractor shall provide access at all times to all local residents, mail service and trash pick up.

Point	Northing	Easting	Elev.	Description
10	7149290.75	2503725.55	690.55	'X' SET IN CONCRETE
11	7148803.46	2503824.91	692.33	1/2"-IRON SET W/RED CAP

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DALLAS, TX 75206 972.235.3031
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TX REG. SURVEYING FIRM LS-101938-05

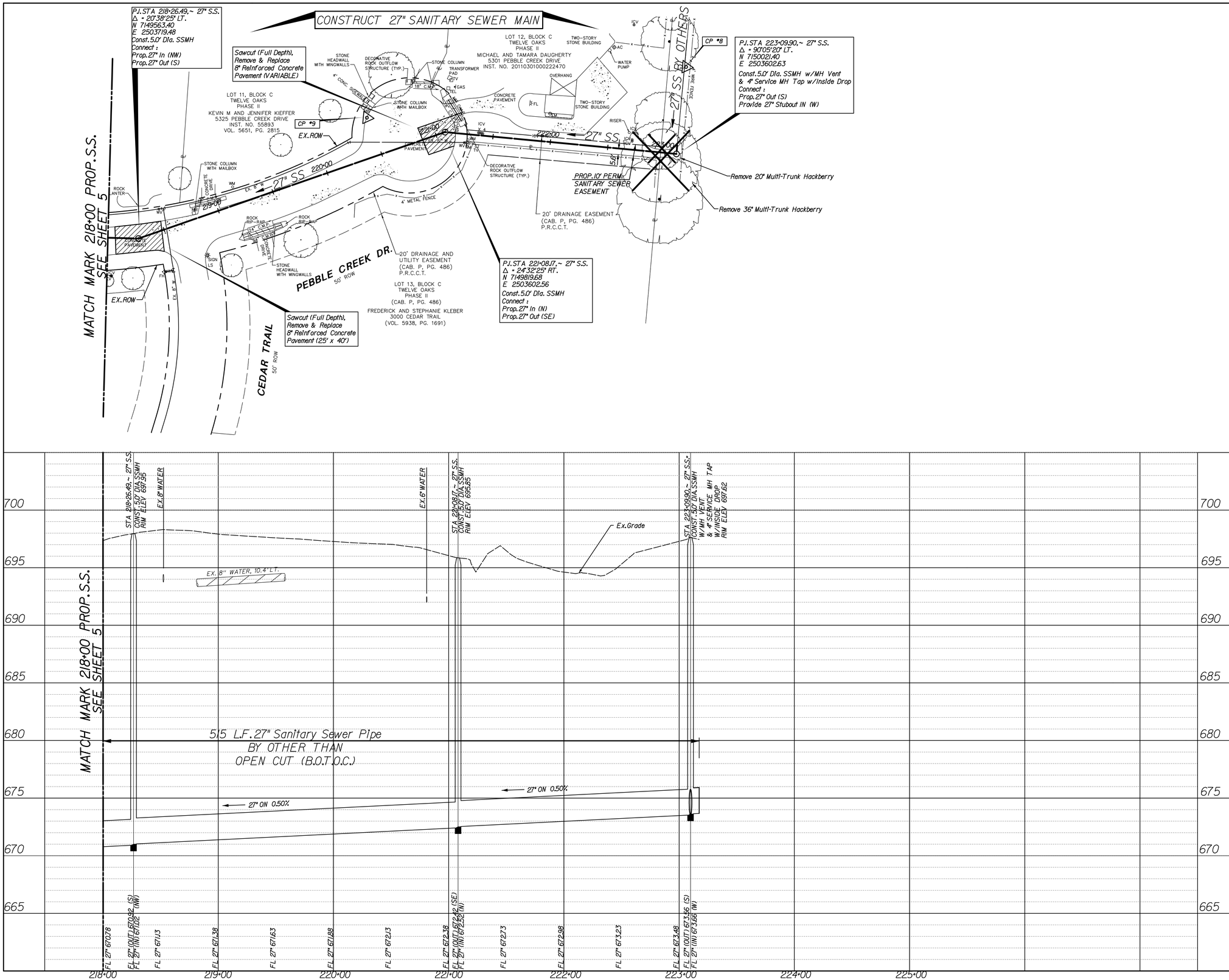
INTERCEPTOR MAIN
PLAN & PROFILE
STA. 209+00 TO STA. 218+00

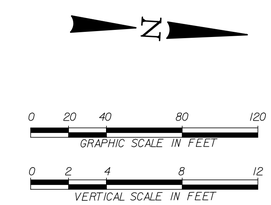
27" SEWER INTERCEPTOR
SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	5

SS-201411-01





NOTE:
1. Provide and maintain working access from roadways to all driveway and intersectioning streets. The contractor shall provide access at all times to all local residents, mail service and trash pick up.

Point	Northing	Easting	Elev.	Description
8	7150022.70	2503526.70	696.15	1/2"-IRON SET W/RED CAP
9	7149751.01	2503596.50	695.83	"X" SET IN BOX

STATE OF TEXAS
CURTIS S. CALDWELL
66178
REGISTERED
PROFESSIONAL ENGINEER
6-2-2015

NO.	DATE	REVISION
	10-01-2015	CONFORMED PLANS

Pacheco Koch
8350 N. CENTRAL EXPWY. SUITE 1000
DALLAS, TX 75206 972.235.3031
TX REG. ENGINEERING FIRM F-14439
TX REG. SURVEYING FIRM LS-101938-05

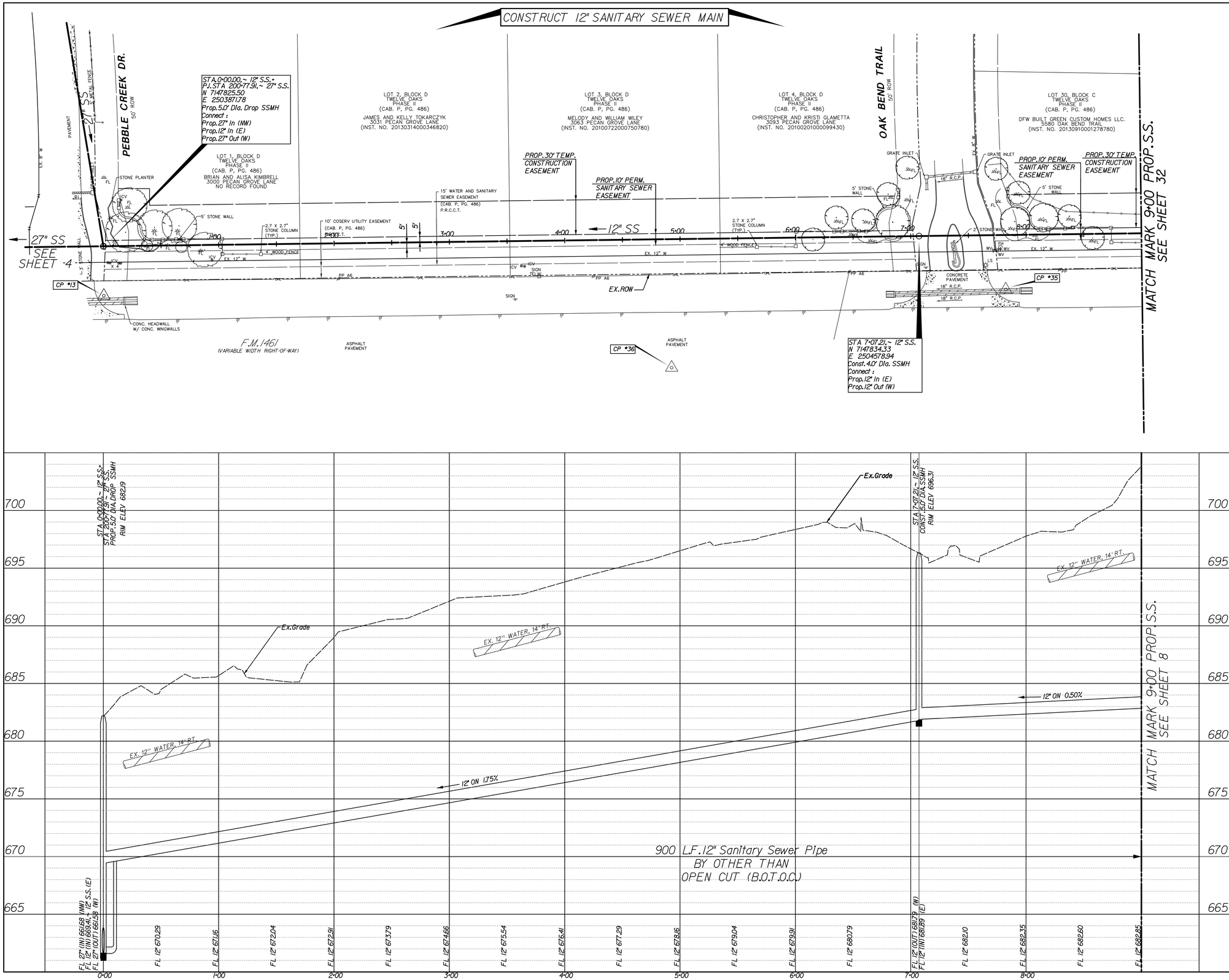
INTERCEPTOR MAIN PLAN & PROFILE STA. 218+00 TO STA. 223+09.90

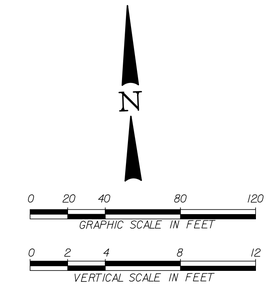
27" SEWER INTERCEPTOR SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	6

SS-201411-01





Point	Northing	Easting	Elev.	Description
13	7147782.62	2503872.16	680.82	1/2"-IRON SET W/RED CAP
35	7147788.05	2504654.08	695.63	1/2"-IRON SET W/RED CAP
36	7147720.26	2504364.47	689.28	1/2"-IRON SET W/RED CAP

STATE OF TEXAS
CURTIS S. CALDWELL
66178
REGISTERED PROFESSIONAL ENGINEER

6-2-2015

NO.	DATE	REVISION
	10-01-2015	CONFORMED PLANS

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TX REG. ENGINEERING FIRM F-14439
TX REG. SURVEYING FIRM LS-10193B-05

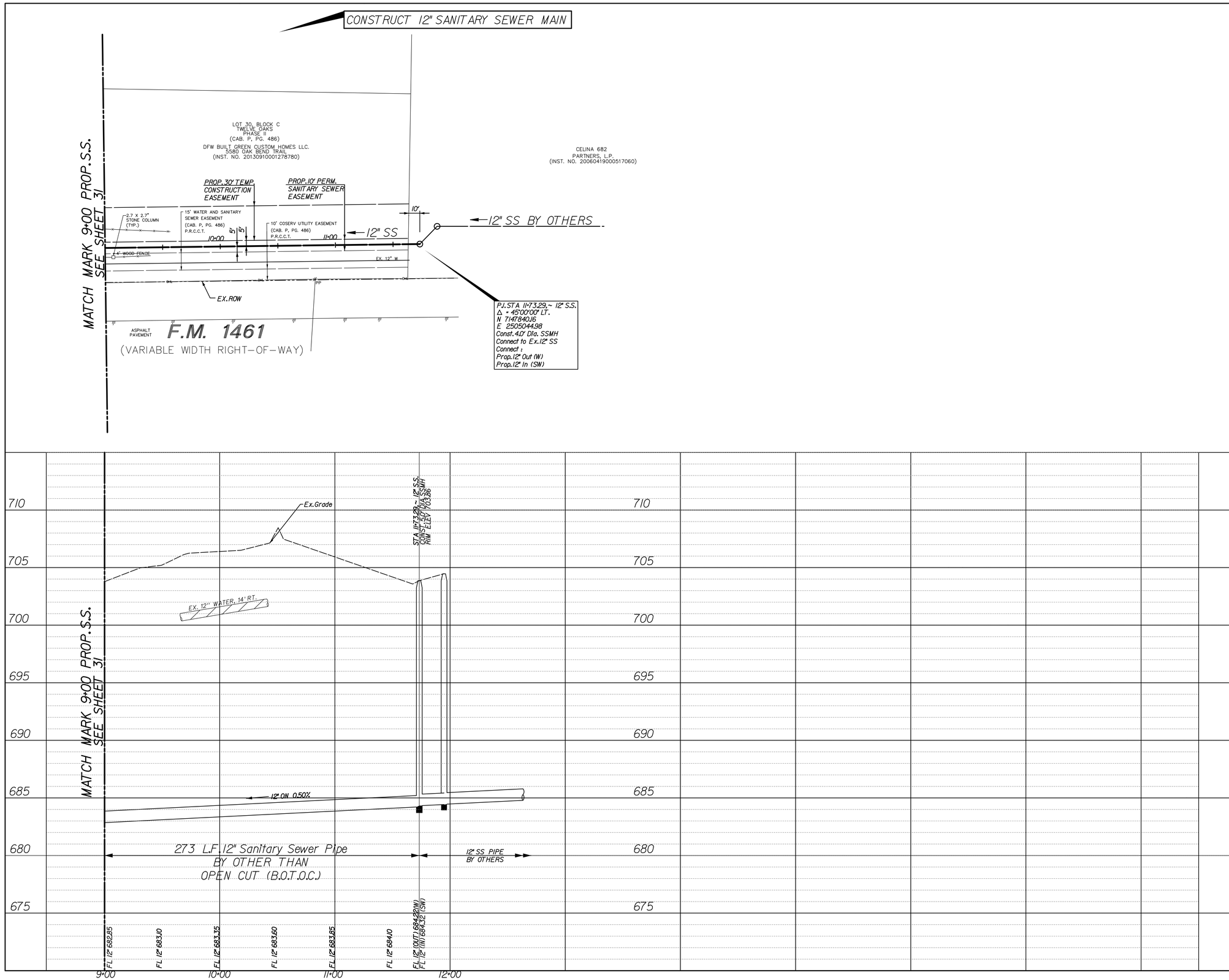
INTERCEPTOR MAIN PLAN & PROFILE STA. 0+00 to STA. 9+00

12" SEWER INTERCEPTOR SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	7

SS-201411-01



Point	Northing	Easting	Elev.	Description
35	7147788.05	2504654.08	695.63	1/2"-IRON SET W/RED CAP
36	7147720.26	2504364.47	689.28	1/2"-IRON SET W/RED CAP

STATE OF TEXAS
CURTIS S. CALDWELL
66178
REGISTERED
PROFESSIONAL ENGINEER
6-2-2015

NO.	DATE	REVISION
	10-01-2015	CONFORMED PLANS

Pacheco Koch
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TX REG. ENGINEERING FIRM F-14439
TX REG. SURVEYING FIRM LS-101938-05

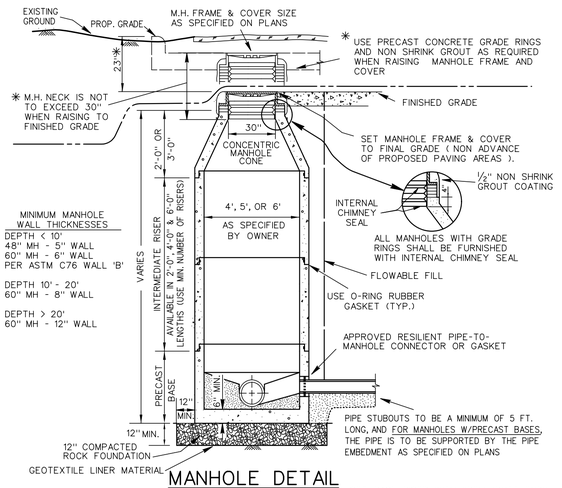
INTERCEPTOR MAIN PLAN & PROFILE STA. 9+00 to STA. 11+73.29

12" SEWER INTERCEPTOR SOUTHEAST SECTOR

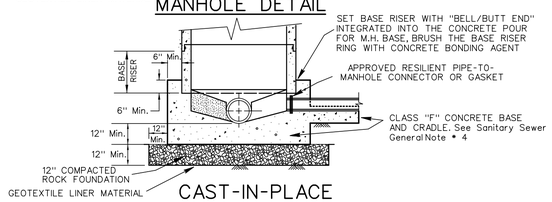
CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	8

SS-201411-01

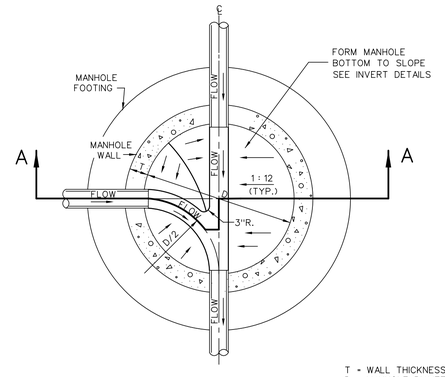


MANHOLE DETAIL

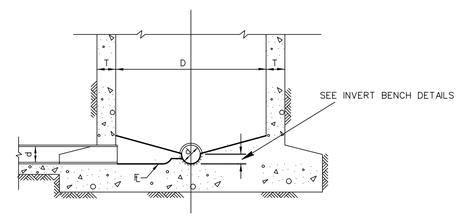


CAST-IN-PLACE
OPTIONAL BASE DETAIL

SANITARY SEWER MANHOLE
PRECAST

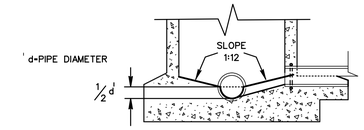


PLAN
N.T.S.

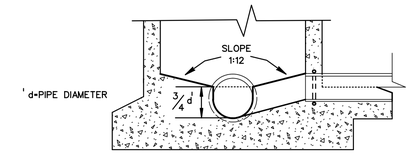


SECTION A-A
N.T.S.

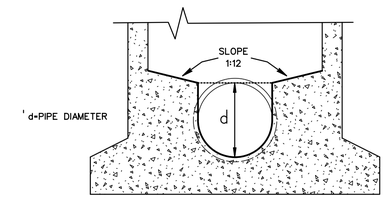
SANITARY SEWER MANHOLE
INVERT INTERSECTION DETAIL



FOR PIPE SMALLER
THAN 15" IN DIAMETER

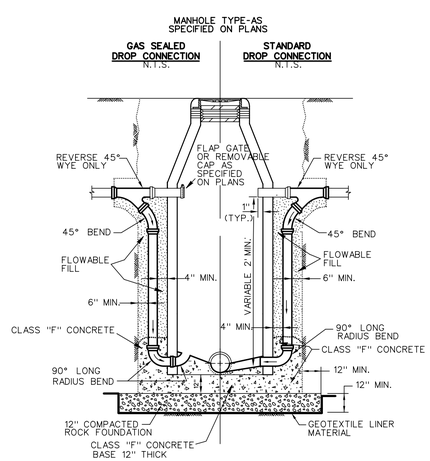


FOR PIPE FROM
15" TO 24" IN DIAMETER

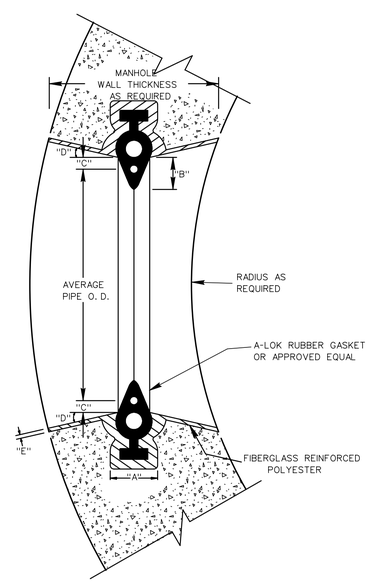


FOR PIPE LARGER
THAN 24" IN DIAMETER

SANITARY SEWER MANHOLE
INVERT BENCH DETAIL



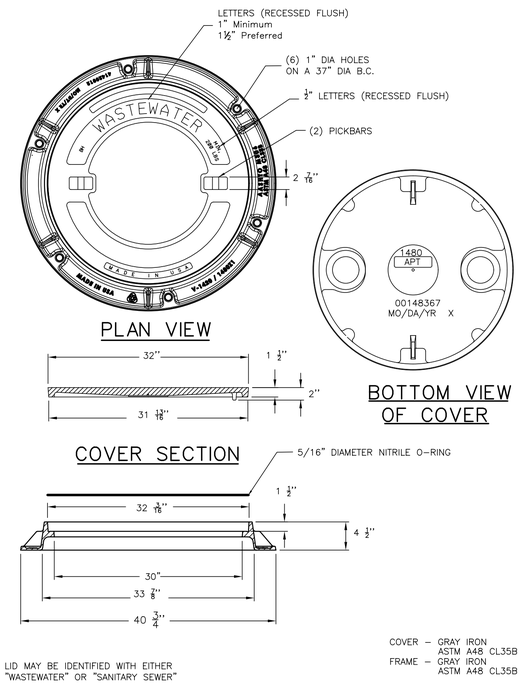
SANITARY SEWER MANHOLE
OUTSIDE DROP CONNECTIONS



DIMENSION FOR MANHOLE PIPE CONNECTOR A.S.T.M. C-923

PIPE SIZE	A	B	C	D	E
4" - 6"	1 ½"	⅞"	⅜"	10*	¼"-⅜"
8" - 21"	2 ¼"	1 ⅜"	⅝"	10*	¼"-⅜"
24" - 60"	2 ⅜"	1 ¾"	¾"	10*	¼"-⅜"

MANHOLE PIPE CONNECTOR
(FOR CAST-IN-PLACE MANHOLES)



WATERTIGHT 32"
C.I. M.H. FRAME & COVER

NO.	DATE	REVISION
	10-01-2015	CONFORMED PLANS

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TX REG. SURVEYING FIRM LS-101938-05

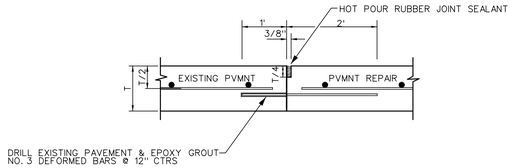
MISCELLANEOUS DETAILS

27" SEWER INTERCEPTOR
SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

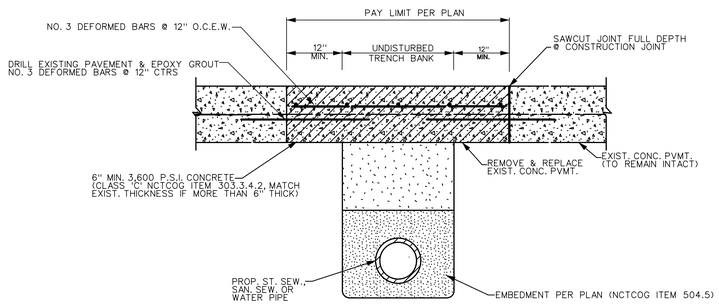
DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	9

SS-201411-01

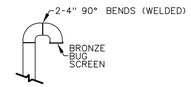


CONSTRUCTION JOINT

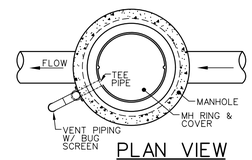
N.T.S.



CONCRETE STREET REPAIR



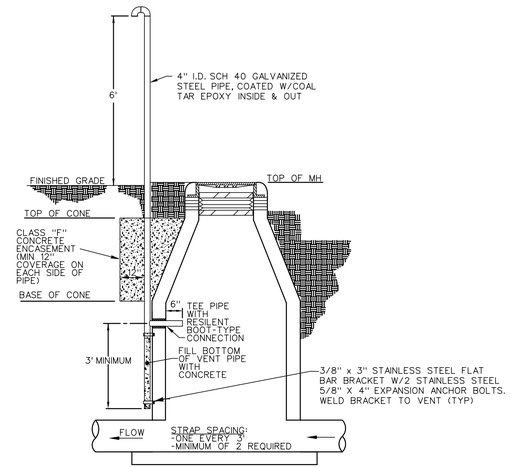
VENT DETAIL



PLAN VIEW

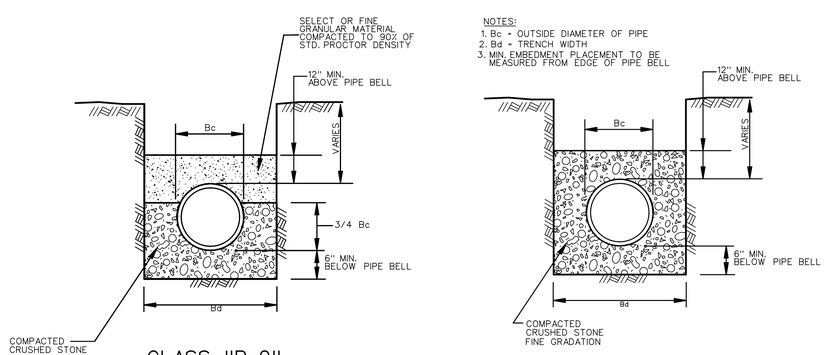
NOTES:

1. VENT PIPE OPENING IN PRECAST CONCRETE MANHOLE WALL SHALL BE CORED WITH A CONCRETE CORING MACHINE.
2. LOCATION OF VENT PIPE SHALL BE AS DIRECTED BY THE CONSTRUCTION INSPECTOR.



ELEVATION VIEW

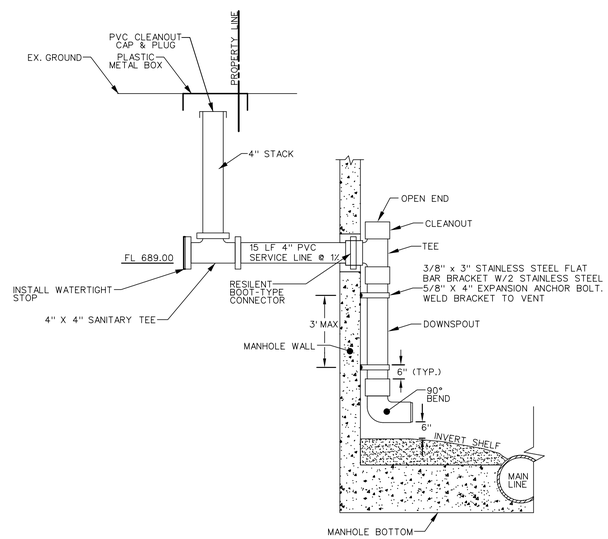
STANDARD MANHOLE VENT



CLASS "B-2"
N.T.S.

CLASS "B-5"
N.T.S.

PIPE EMBEDMENT



SANITARY SEWER SERVICE MANHOLE TAP W/INSIDE DROP

5301 PEBBLE CREEK DRIVE

NOTES:

1. PIPING CONFIGURATION TO BE USED ON ALL DROPS OVER 20 INCHES.
2. DROPS TO BE CONSTRUCTED OF PVC PIPE (SDR 26).
3. SERVICE LINE MAY NOT ENTER MANHOLE THROUGH CONE SECTION OR ITS JOINT.
4. OPENING IN PRECAST CONCRETE MANHOLE WALL SHALL BE CORED WITH A CONCRETE CORING MACHINE.

NO.	DATE	REVISION
	10-01-2015	CONFORMED PLANS

Pacheco Koch
8350 N. CENTRAL EXPWY. SUITE 1000
DALLAS, TX 75206 972.235.3031
TX REG. ENGINEERING FIRM F-14439
TX REG. SURVEYING FIRM LS-101938-05

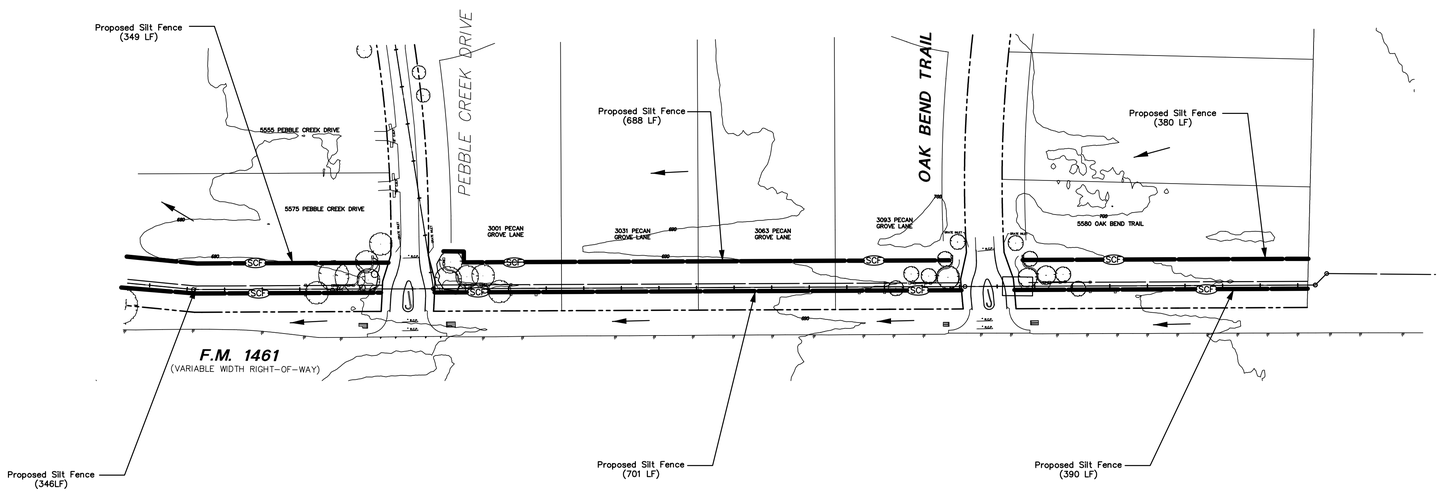
MISCELLANEOUS DETAILS

27" SEWER INTERCEPTOR SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	SEPT 2015	3551-14.141	10

SS-201411-01



0 50 100 200 300
GRAPHIC SCALE IN FEET

LEGEND

- BH — BALED HAY
- SCF — TEMPORARY SEDIMENT FENCE
- RF — ROCK FILTER DAM
- DIRECTION OF FLOW
- CONTOUR INTERVAL 10'

NOTES:

1. TEMPORARY EROSION CONTROL ELEMENTS TO REMAIN IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED OR AS DIRECTED BY ENGINEER.
2. ALL DISTURBED AREAS TO RECEIVE HYDROMULCH SEEDING. SOD AS DIRECTED BY ENGINEER.
3. LOCATION OF EROSION CONTROL ELEMENTS IS APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD.

STATE OF TEXAS
CURTIS S. CALDWELL
66178
REGISTERED
PROFESSIONAL ENGINEER
6-2-2015

NO.	DATE	REVISION
	10-01-2015	CONFORMED PLANS

Pacheco Koch
8350 N. CENTRAL EXPWY. SUITE 1000
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TX REG. ENGINEERING FIRM F-14439
TX REG. SURVEYING FIRM LS-101938-05

EROSION CONTROL PLAN

27" SEWER INTERCEPTOR SOUTHEAST SECTOR

CITY OF CELINA, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	JOB NO.	SHEET
PK	PK	MAY 2015	3551-14.141	11

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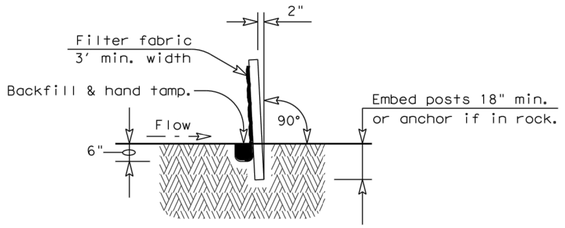


SECTION A-A

GENERAL NOTES

1. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PLAN SHEET LEGEND

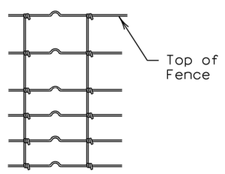
Sediment Control Fence —— SCF ——

SEDIMENT CONTROL FENCE USAGE GUIDELINES

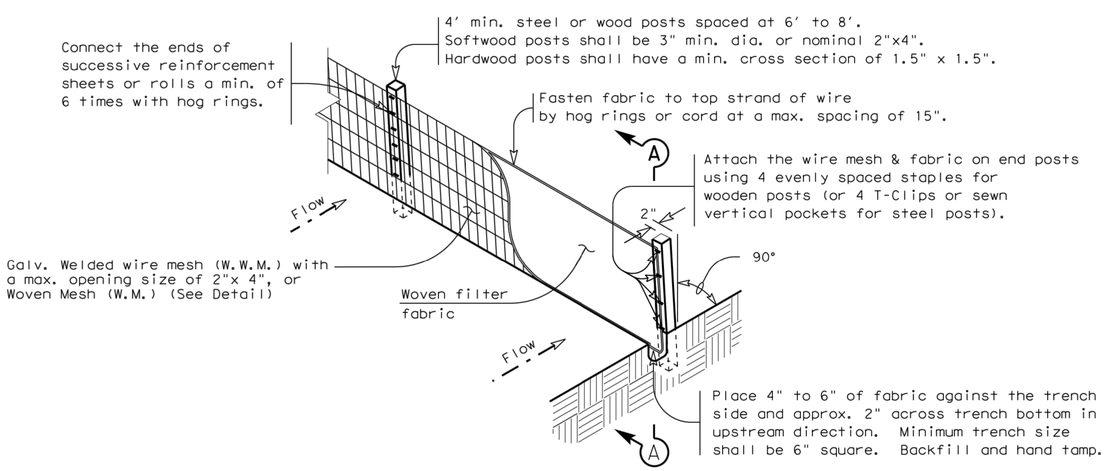
A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

Sediment control fence should be sized to filter a max. flow through rate of 100 GPM/FT^2. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

Galv. Hinge joint knot woven mesh (12.5 Ga. Min.) requires a minimum of five horizontal wires spaced at a max. 12 inches apart and all vertical wires spaced at a max. 12 inches apart.

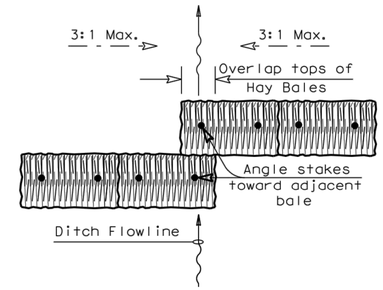


Hinge Joint Knot Woven Mesh (Option)

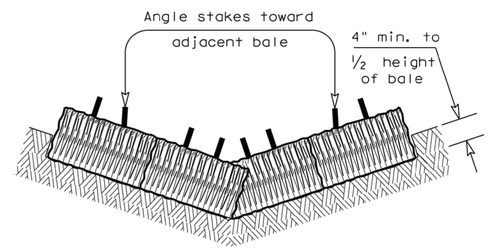


TEMPORARY SEDIMENT CONTROL FENCE

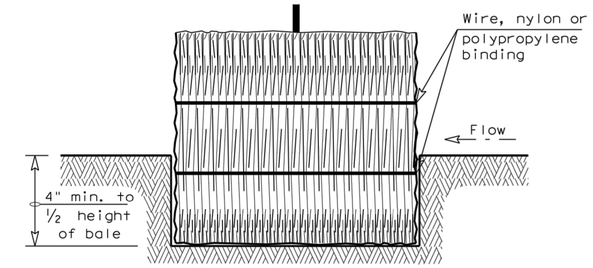
—— SCF ——



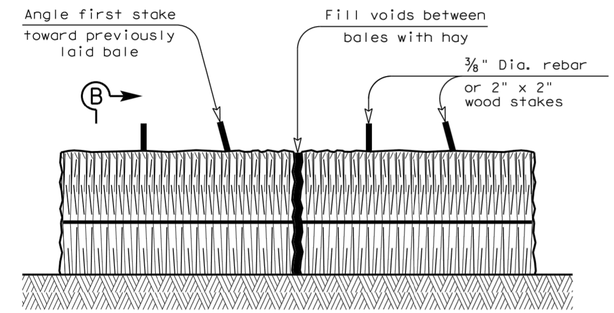
PLAN VIEW



PROFILE VIEW



SECTION B-B



BALED HAY FOR EROSION CONTROL

—— BH ——

PLANS SHEET LEGEND

Baled Hay —— BH ——

BALED HAY USAGE GUIDELINES

A Baled Hay installation may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A two year storm frequency may be used to calculate the flow rate to be filtered. The installation should be sized to filter a maximum flow thru rate of 5 GPM/FT^2 of cross sectional area. Baled hay may be used at the following locations:

1. Where the runoff approaching the baled hay flows over disturbed soil for less than 100'. If the slope of the disturbed soil exceeds 10%, the length of slope upstream the baled hay should be less than 50'.
2. Where the installation will be required for less than 3 months.
3. Where the contributing drainage area is less than ½ acre.

For Baled Hay installations in small ditches, the additional following considerations apply:

1. The ditch sideslopes should be graded as flat as possible to maximize the drainage flowrate thru the hay.
2. The ditch should be graded large enough to contain the overtopping drainage when sediment has filled to the top of the baled hay.

Bales should be replaced usually every 2 months or more often during wet weather when loss of structural integrity is accelerated.

GENERAL NOTES

1. Hay bales shall be a minimum of 30" in length and weigh a minimum of 50 Lbs.
2. Hay bales shall be bound by either wire or nylon or polypropylene string. The bales shall be composed entirely of vegetative matter.
3. Hay bales shall be embedded in the soil a minimum of 4" and where possible ½ the height of the bale.
4. Hay bales shall be placed in a row with ends tightly abutting the adjacent bales. The bales shall be placed with bindings parallel to the ground.
5. Hay bales shall be securely anchored in place with ⅜" Dia. rebar or 2" x 2" wood stakes, driven through the bales. The first stake shall be angled towards the previously laid bale to force the bales together.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & BALED HAY

EC(1)-09

FILE: ec109.dgn	DN: TxDOT	CK: AM	DW: TV	CK: BD
© TxDOT June 1993	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST		COUNTY	SHEET NO. 12

DATE:
FILE:

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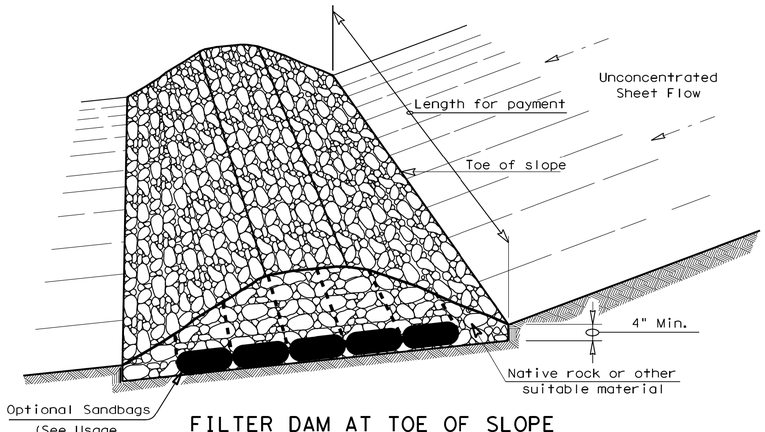
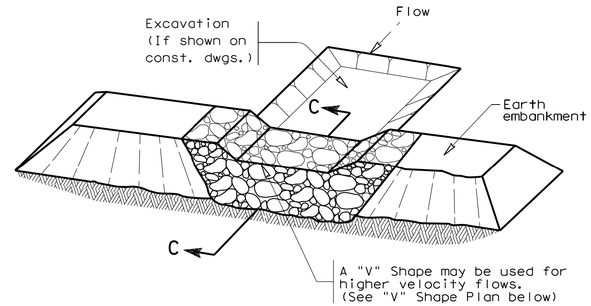


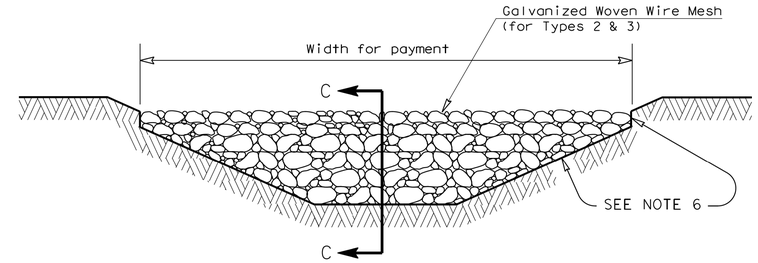
FILTER DAM AT TOE OF SLOPE

RFD1
TYPE 1



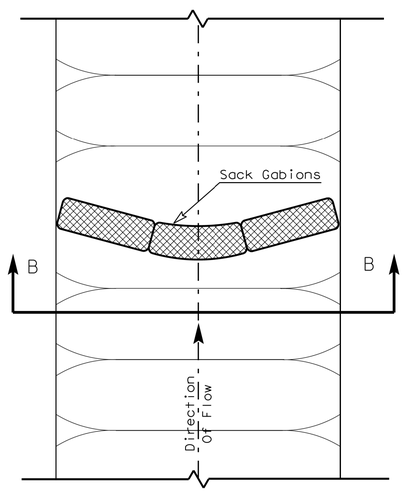
FILTER DAM AT SEDIMENT TRAP

RFD1 OR RFD2
TYPE 1 OR TYPE 2

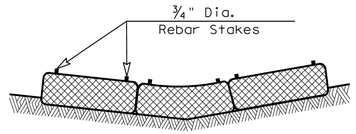


FILTER DAM AT CHANNEL SECTIONS

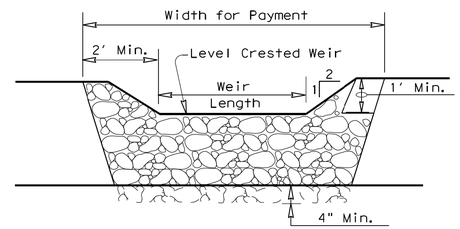
RFD1 OR RFD2 OR RFD3
TYPE 1 OR TYPE 2



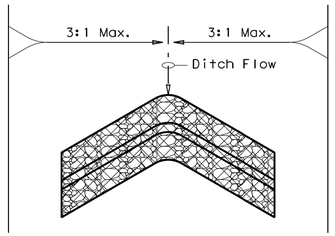
PLAN VIEW



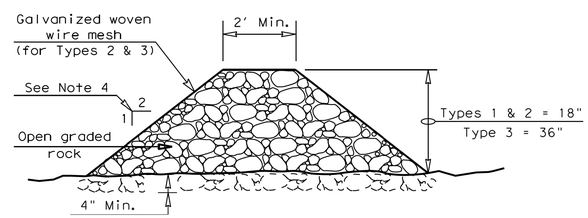
SECTION B-B



PROFILE



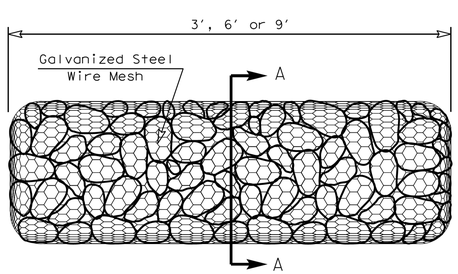
"V" SHAPE
(Plan View)



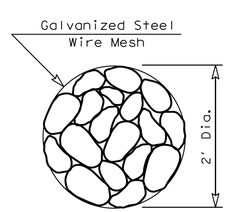
SECTION C-C

PLANS SHEET LEGEND

Type 1 Rock Filter Dam — RFD1
Type 2 Rock Filter Dam — RFD2
Type 3 Rock Filter Dam — RFD3



TYPE 4 (SACK GABIONS)



SECTION A-A

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approx. 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. In stream use the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ¾" dia. rebar stakes.
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

EC(2)-93

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