

ENGINEERING PLANS FOR THE CONSTRUCTION OF THE MAYDELLE NEIGHBORHOOD PHASE TWO

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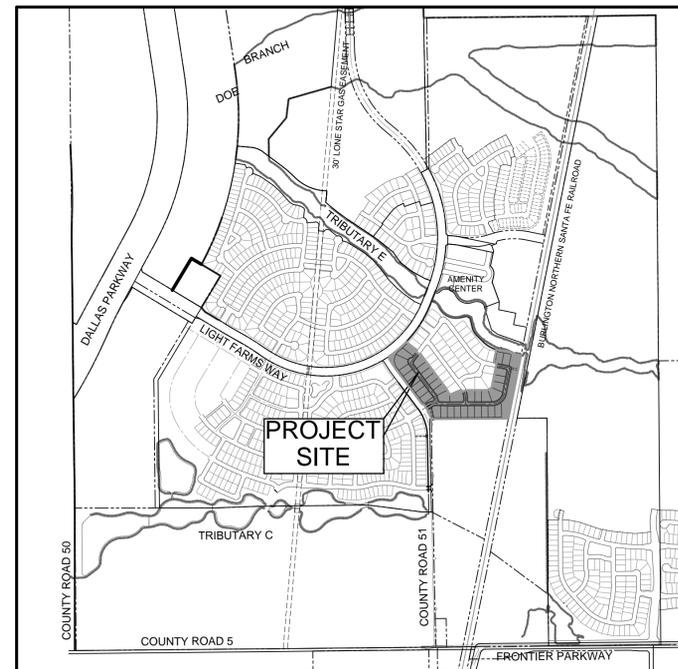
LIGHT FARMS

COLLIN COUNTY, TEXAS

CITY OF CELINA
ENGINEERING DEPARTMENT
RELEASED FOR CONSTRUCTION

DATE 10/2/2015 BY *[Signature]*

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. est.1876



LOCATION MAP

N.T.S.



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10-02-2015

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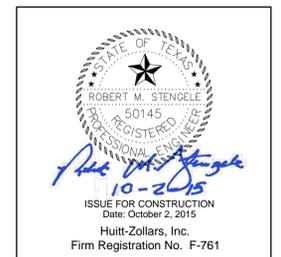
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CITY OF CELINA GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) DETAILS & SPECIFICATIONS (CURRENT EDITION) THEREIN AND THE CITY OF CELINA'S ADDENDUM THERETO. SEE SUPPLEMENTARY CONDITIONS, SC-3.02.
- BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A CONSTRUCTION SEQUENCE SCHEDULE. THE CONSTRUCTION SCHEDULE SHALL BE SUCH THAT THERE IS THE MINIMUM INTERFERENCE WITH TRAFFIC ALONG OR ADJACENT TO THE PROJECT.
- CONSTRUCTION MAY NOT BEGIN EARLIER THAN 7:00 A.M. ON WEEKDAYS NOR CONTINUE AFTER DARK WITHOUT PERMISSION FROM THE CITY OF CELINA. CONSTRUCTION ON HOLIDAYS AND SATURDAY MUST BE APPROVED TWO DAYS IN ADVANCE, A FEE OF \$300.00 A DAY FOR WORKING ON HOLIDAYS AND SATURDAY WILL BE ASSESSED PAYABLE TO THE CITY BEFORE WORK IS PREFORMED. WORK MAY NOT BE BEGIN BEFORE 8:00 A.M. AND WORK ON SUNDAY IS PROHIBITED WITHOUT SPECIAL PERMISSION AND PAYMENT OF FEES.
- UTILITIES SHOWN ON THE PLANS WERE TAKEN FROM FIELD SURVEYS AND INFORMATION PROVIDED BY THE UTILITY COMPANIES. THE COMPLETENESS AND THE ACCURACY OF THIS DATA IS NOT GUARANTEED. THE CONTRACTOR IS RESTRAINED, FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES AND PROTECTING THEM FROM DAMAGE DURING CONSTRUCTION.
- WORK MAY NOT BE BACKFILLED OR COVERED UNTIL THE CITY AND/OR RPR HAS INSPECTED IT.
- THE OWNER WILL PAY FOR FIRST TIME MATERIAL TESTING. ANY RETESTING WILL BE AT CONTRACTOR'S EXPENSE. MATERIAL TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY OF OWNER'S CHOICE. THE FOLLOWING MATERIAL TESTS SHALL BE PROVIDED BY THE CONTRACTOR:
6.A. EMBANKMENT - ONE SOIL DENSITY TEST SHALL BE PERFORMED AT EACH LOCATION FOR EACH 500 C.Y. OF BACKFILL PLACED.
6.B. PAVEMENT SUB GRADE - ONE GRADATION TEST (WHERE LIME STABILIZED) AND ONE SOIL DENSITY TEST SHALL BE PERFORMED FOR EACH 300 LINEAR FEET OF PAVEMENT UNLESS OTHERWISE NOTED. GRADATIONS MUST PASS 100% THROUGH A 1 1/4" SIEVE AND 80% THROUGH A #4 SIEVE.
6.C. UTILITY TRENCH BACKFILL - ONE SOIL DENSITY TEST SHALL BE PERFORMED AT 300 FEET INTERVALS OR AS DIRECTED BY THE INSPECTOR.
6.D. CONCRETE TESTS:
6.D.1. COMPRESSIVE STRENGTH - FOUR TEST CYLINDERS SHALL BE TAKEN FROM A REPRESENTATIVE PORTION OF THE CONCRETE BEING PLACED FOR EVERY 150-CUBIC YARDS OF CONCRETE PLACED OR CONCRETE PAVERMENT PLACED, BUT IN NO CASE SHALL LESS THAN 2 SETS OF CYLINDERS BE TAKEN FROM ANY ONE DAY'S PLACEMENT.
6.D.2. AIR, SLUMP, AND TEMPERATURE TESTS SHALL BE TAKEN FOR EVERY SET OF CYLINDERS MADE. CONCRETE WITH A TEMPERATURE ABOVE 95F WILL BE REJECTED.
6.D.3. ADDITIONAL CYLINDERS AND/OR TESTS MAY BE REQUIRED AT THE INSPECTOR'S DISCRETION.
6.E. THE CITY SHALL SELECT THE LOCATION AND DEPTH OF EACH SOIL DENSITY TEST, UNLESS OTHERWISE DIRECTED.
- ALL EXCAVATION ON THE PROJECT IS UNCLASSIFIED.
- TEMPORARY EROSION CONTROL SHALL BE USED TO MINIMIZE THE SPREAD OF SILT AND MUD FROM THE PROJECT ON TO EXISTING STREETS, ALLEYS, DRAINAGE WAYS AND PUBLIC AND PRIVATE PROPERTY. TEMPORARY EROSION CONTROLS MAY INCLUDE SILT FENCES, ROCK CHECK DAMS, STABILIZED CONSTRUCTION ENTRANCES, STRAW BALES, BERMS, DIKES, SWALES, STRIPS OF UNDISTURBED VEGETATION, CHECK DAMS AND OTHER METHODS AS REQUIRED BY THE CITY MANAGER OR HIS REPRESENTATIVE AND SHALL CONFORM TO THE STORM WATER QUALITY BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS AND THE CITY OF CELINA EROSION AND SEDIMENT CONTROL MANUAL.
- FINISHED SLOPES ON PUBLIC RIGHTS-OF-WAY AND EASEMENTS SHALL NOT BE STEEPER THAN 4:1. ALL SLOPES STEEPER THAN 6:1 SHALL BE COVERED WITH EROSION CONTROL MATTING AND/OR HYDRO MULCHED AND MAINTAINED BY THE CONTRACTOR UNTIL GRASS COVERS ALL PARTS OF THE SLOPE.
- THE CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES ALONG THE PROJECT.
- REMOVE, SALVAGE AND REPLACE ALL STREET AND TRAFFIC CONTROL SIGNS, WHICH MAY BE DAMAGED BY THE CONSTRUCTION OF THE PROJECT.
- ALL TRENCHING AND EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH OSHA STANDARDS. TRENCH SAFETY DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL SUBMIT A TRENCH SAFETY DESIGN APPROVED BY A PROFESSIONAL ENGINEER TO THE CITY FOR REVIEW PRIOR TO THE START OF ANY UNDERGROUND UTILITY CONSTRUCTION.

CITY OF CELINA PAVING NOTES

- ALL EMBANKMENTS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- ALL STREETS AND ALLEYS SHALL BE PLACED ON LIME STABILIZED SUB GRADE WITH A LIME CONTENT NOT LESS THAN 7.5% OR AS APPROVED BY THE CITY ENGINEER.
- THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE STREET PAVING SHALL NOT BE LESS THAN 3600 PSI AND SHALL BE AIR ENTRAINED. WATER MAY NOT BE APPLIED TO THE SURFACE OF CONCRETE PAVING TO IMPROVE WORKABILITY.
- ALL CURB AND GUTTER SHALL BE INTEGRAL WITH THE PAVEMENT.
- PARABOLIC CROWNS ARE REQUIRED ON ALL STREET PAVEMENTS EXCEPT ON MAJOR THROUGHFARES WHERE STRAIGHT SECTIONS ARE REQUIRED.
- STREETS AND ALLEYS SHALL BE CONSTRUCTED WITH PROVISIONS FOR SIDEWALK RAMPS AT ALL INTERSECTIONS.

CITY OF CELINA STORM DRAINAGE CONSTRUCTION NOTES

- STORM SEWER PIPE SHALL BE REINFORCED CONCRETE, CLASS III UNLESS OTHERWISE NOTED.
- ALL STRUCTURAL CONCRETE SHALL BE CLASS "C" (3600 PSI COMPRESSIVE STRENGTH AT 28 DAYS), AIR ENTRAINED.
- THE CONTRACTOR SHALL INSTALL PLUGS IN STORM SEWER LINES OR OTHERWISE PREVENT MUD FROM ENTERING THE STORM SEWER SYSTEM DURING CONSTRUCTION.

CITY OF CELINA WATER AND SANITARY SEWER NOTES

- WATER MAINS SHALL BE AWWA C-900 PVC OR 905 PVC CLASS 200 UNLESS OTHERWISE NOTED. MINIMUM COVER FOR WATERLINES IS 48" BELOW TOP OF CURB, 60" WHERE NO CURBED STREET IS PRESENT OR AS REQUIRED TO CLEAR EXISTING UTILITIES, WHICHEVER IS GREATER. CLASS "B-3" EMBEDMENT UNLESS OTHERWISE NOTED.
- ALL UTILITY TRENCH BACKFILL SHALL BE PERFORMED IN 12" LOOSE LIFTS AND MECHANICALLY COMPACTED WITH APPROVED VIBRATORY METHODS. WATER JETTING IS PROHIBITED.
- MARKING TAPE SHALL BE INSTALLED ONE FOOT ABOVE AND OVER PVC WATER LINES.
- FITTINGS FOR PVC WATER LINES SHALL BE DUCTILE IRON AND BE ENCASED IN A POLYETHYLENE SHEATH.
- ALL MECHANICAL JOINTS WILL BE RESTRAINED. (MEGA-LUG, ETC.)
- VALVES, INCLUDING TAPPING VALVES SHALL BE RESILIENT SEAT GATE VALVES, UNLESS NOTED OTHERWISE.

- ALL DIRECT BURIAL VALVES SHALL BE PROVIDED WITH CAST IRON VALVE BOXES WITH PVC STACKS. VALVE STACKS SHALL BE VERTICAL AND CONCENTRIC WITH THE VALVE STEM. STAINLESS STEEL VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES WHERE THE OPERATING NUT IS GREATER THAN 4 FEET BELOW FINISHED GRADE.
- FIRE HYDRANTS SHALL BE KENNEDY OR EQUAL AS DIRECTED OR APPROVED BY THE CITY OF CELINA ON A CASE BY CASE BASIS AND FIELD PAINTED SILVER WITH BONNET AND CAPS COLOR-CODED TO PIPE SIZE.
8.A. SIX INCH LINE- SILVER BODY WITH RED BONNET AND CAPS.
8.B. EIGHT INCH LINE- SILVER BODY WITH BLUE BONNET AND CAPS.
8.C. TEN INCH LINE- SILVER BODY WITH GREEN BONNET AND CAPS.
8.D. TWELVE INCH AND LARGER- SILVER BODY WITH YELLOW BONNET AND CAPS.
- ALL EXPOSED BOLTING ON ANY BURIED EQUIPMENT OR MATERIAL SHALL BE STAINLESS STEEL, INCLUDED ARE:
9.A. BONNET AND STUFFING BOX BOLTS ON VALVES.
9.B. SHOE BOLTS ON FIRE HYDRANTS.
9.C. FLANGE BOLTS.
9.D. "COR-TEN" MECHANICAL JOINT "T" BOLTS ARE ACCEPTABLE FOR DIRECT BURIAL SERVICE.
- PENDING ON METER SIZE; METER BOXES SHALL BE DFW37C-12-1SAF, DFW38C-14-1SAF, DFW65C-14-1SAF, OR APPROVED EQUAL, AND SHALL INCORPORATE THE CELINA LOGO IN THE LID.
- ONE SAMPLE STATION SHALL BE PROVIDED FOR EVERY 250 CONNECTIONS.
- SANITARY SEWER MAINS SHALL BE DR 35 PVC. EMBEDMENT SHALL BE CLASS "B+" UNLESS OTHERWISE NOTED.
12.A. THE CONTRACTOR SHALL INSTALL AND MAINTAIN WATERTIGHT PLUGS IN ALL CONNECTIONS TO THE CITY'S SANITARY SEWER SYSTEM UNTIL THE CITY ACCEPTS THE PROJECT.
12.B. ALL SANITARY SEWER LINES AND MANHOLES SHALL BE LEAK TESTED BEFORE THE PROJECT IS ACCEPTED. DEFLECTION TESTING OF PVC SEWER LINES IS REQUIRED. DEFLECTION SHALL BE TESTED WITH A MANDREL FOR 5% DEFLECTION.
12.C. ALL SEWER LINES SHALL BE VIDEO INSPECTED WITH A COPY OF THE VIDEO AND STATION REPORT SUBMITTED TO THE INSPECTOR.
12.D. MANDREL, AIR TEST, AND VIDEO INSPECTION SHALL NOT BE PERFORMED UNTIL ALL UTILITIES ARE COMPLETE, IN PLACE, AND BACKFILLED.

SPECIFICATIONS AND DETAILS ARE NOT MEANT TO EXCLUDE ANY MANUFACTURER. ANY SPECIFICATION OR DETAIL MAY BE REPLACED WITH AN APPROVED EQUAL UPON APPROVAL BY THE CITY OF CELINA.

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION INCLUDING THE STANDARD DRAWINGS THEREIN AND THE CITY OF CELINA'S ADDENDUM THERETO. CONTRACTOR SHALL HAVE AT LEAST ONE SET OF APPROVED ENGINEERING PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES. SEE SUPPLEMENTARY CONDITIONS, SC-3.02.
- CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LINE LOCATION PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY TO THOSE COMPANIES FOR ANY DAMAGES CAUSED BY THEIR FACILITIES.
DIG TESS 800-DIG-TESS GCEC-TELECOM 903-482-7274
GCEC-ELECTRIC 903-821-3007 AT&T
972-569-3013
ATMOS ENERGY 214-341-9900
CROSSTEX ENERGY 817-570-6753 ONEOK 903-257-6994
COSERV-ELEC 940-321-7800 COSERV-GAS 940-321-7800
CITY OF CELINA 972-382-2682 TOWN OF PROSPER 972-347-9969
MARILEE SUD 972-382-3222 GRANDE 972-410-0583
SUDDEN LINK 469-853-0486
- PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE PLANS INCLUDING ALL NOTES, AND OTHER APPLICABLE STANDARDS OR SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL STANDARDS OR SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL HAVE IN HIS POSSESSION, PRIOR TO CONSTRUCTION, ALL NECESSARY PERMITS, AND LICENSES, ETC.
- IN THE EVENT AN ITEM IS NOT COVERED IN THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AN ALTERNATIVE TO THE OWNER AND ENGINEER. THE ENGINEER SHALL REVIEW AND APPROVE CONSTRUCTION MATERIALS, SHOP DRAWINGS AND SPECIFICATIONS.
- CONSTRUCTION OBSERVATION WILL BE PERFORMED BY REPRESENTATIVES OF THE OWNER, ENGINEER, DISTRICT, GEOTECHNICAL ENGINEER, AND REVIEWING AUTHORITIES AND AGENCIES. UNLESS OTHERWISE PROVIDED TO THEM AT ALL TIMES, CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING AND SCHEDULING REQUIRED INSPECTIONS.
- ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS ONTO DEVELOPED OR UNDEVELOPED AREAS WILL BE ALLOWED, UNLESS SPECIFICALLY NOTED ON PLANS. ANY DAMAGE RESULTING THERE FROM SHALL BE CONTRACTOR'S RESPONSIBILITY TO REPAIR.
- 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 PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY TO THOSE COMPANIES FOR ANY DAMAGES CAUSED TO THEIR FACILITIES.
- CONSTRUCTION STAKING WILL BE PERFORMED BY OWNER'S ENGINEER. SEE SUPPLEMENTARY CONDITIONS, SC-4.05.
- IF UNFORESEEN PROBLEMS OR CONFLICTS ARE ENCOUNTERED IN THE CONSTRUCTION, FOR WHICH AN IMMEDIATE SOLUTION IS NOT APPARENT, THE ENGINEER AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
- CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD LOCATIONS AND WORKING AROUND EXISTING UTILITIES AND IMPROVEMENTS. SEE SUPPLEMENTARY CONDITIONS, SC-4.02 AND SC-6.13.
- TRAFFIC CONTROL MEASURES SHALL BE INSTALLED FOR ANY WORK ACTIVITY THAT TAKES PLACE ON OR ADJACENT TO ANY PUBLIC STREET OR ROADWAY. TRAFFIC CONTROL MEASURES SHALL CONFORM TO PART IV OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL PROVIDE A TRENCH SAFETY PLAN AND BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO HIS WORK.
- ALL PIPE PRICES SHALL INCLUDE REQUIRED EMBEDMENT PER PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL POLICE SITE REGULARLY AND KEEP SITE FREE OF TRASH AND CONSTRUCTION DEBRIS. CONTRACTOR IS REQUIRE TO REPAIR AND/OR REPLACE DAMAGED EROSION CONTROL DEVICES. REFER TO SWPPP FOR MAINTENANCE SCHEDULE.

STORM DRAINAGE CONSTRUCTION NOTES

- INLET BLOCKOUTS, VARIABLE CURB, AND INLET TOP WILL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY FOLLOWING PAVING OPERATIONS. INLET BLOCKOUTS SHALL BE PLACED 3.5 FEET FROM BACK OF CURB FOR A DISTANCE OF TEN (10) FEET UPSTREAM (BOTH SIDES IN SAG CONDITIONS) AND FIVE (5) FEET DOWNSTREAM OF THE INSIDE FACE OF INLET. UNLESS OTHERWISE NOTED IN CONSTRUCTION PLANS.
- STORM DRAINAGE PIPE AND HEADWALLS: UNLESS NOTED OTHERWISE ON THE PLANS, ALL STORM DRAINAGE PIPE SHALL BE CLASS III AND EMBEDMENT SHALL BE CLASS "B+" PER NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, STANDARD DRAWING NO. 3040. THE UNIT PRICE SUPPLIED FOR THE CONSTRUCTION OF THE STORM HEADWALLS SHALL INCLUDE VALUE FOR THE NECESSARY EXCAVATION/GRADE-TO-DRAIN ACTIVITY CONSIDERED SUBSIDIARY TO THE INSTALLATION OF THE STORM OUTFALL STRUCTURES. THE EXCAVATED CHANNEL SHALL HAVE A MINIMUM 1% LONGITUDINAL SLOPE AND MINIMUM BOTTOM WIDTH OF TWICE THE WIDTH OF THE OUTFALLING PIPE OR BOX, UNLESS OTHERWISE NOTED, AND SHALL HAVE THE EMBANKMENTS SLOPED BACK AT A 3:1 SLOPE.
- INLET BOTTOM CONSTRUCTION: WITHIN 24 HOURS OF THE COMPLETION OF THE CONSTRUCTED INLET BOTTOM, EROSION CONTROL MEASURES SHALL BE EMPLOYED AS SHOWN IN THE NCTCOG EROSION CONTROL DETAILS. INTERIM EROSION CONTROL MEASURES SHALL BE EMPLOYED UNTIL THE CONCRETE FOR THE INLET BASE HAS SET AND THE REQUIRED EROSION CONTROL MEASURES INSTALLED.
- ROCK RIP RAP: THE PLACEMENT OF ROCK RIP-RAP AT STORM DRAINAGE OUTFALLS WILL BE DELAYED UNTIL THE COMPLETION OF ALL UTILITY WORK. THE ROCK RIP-RAP MAY ALSO BE DESIGNATED FOR PLACEMENT ON THE FRESH EMBANKMENTS TO STABILIZE THE SLOPES.
- WATER AND SANITARY SEWER CONSTRUCTION NOTES

GRADING NOTES

- HAUL ROADS ARE SUBSIDIARY TO THIS CONTRACT. SPECIAL CARE SHALL BE TAKEN TO INSTALL HAUL ROAD CROSSINGS ABOVE THE ATMOS GAS MAIN WHICH CROSSES THE PROJECT SITE. AT EACH AND EVERY HAUL ROAD OR CONSTRUCTION TRAFFIC CROSSING OF THE GAS MAIN THE CONTRACTOR SHALL INSTALL A BERM TO ACHIEVE AT LEAST FOUR ADDITIONAL FEET OF COVER OVER THE GAS MAIN AND TEN FEET

- EITHER SIDE OF THE GAS MAIN. THE WIDTH OF THE CROSSING SHALL BE LIMITED TO TWENTY FOUR FEET.
- TOPSOIL STRIPPING & REPLACEMENT: THIS CONTRACT REQUIRES THAT A NOMINAL 3-INCH DEPTH OF TOPSOIL BE STRIPPED FROM ALL CLEARED AND GRUBBED AREAS. TOPSOIL STRIPPINGS SHALL BE INCORPORATED INTO LANDSCAPE AREAS OUTSIDE OVERBUILT PADS, IN STREET PARKWAYS, MEDIANS, OPEN SPACE, EARTHEN DRAINAGE DITCHES AND SWALES FOR ALL SUBDIVISIONS, A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE PLACED IN ADVANCE OF GRASSING OPERATIONS. THE GRADING OPERATIONS SHALL ACCOMMODATE TOPSOIL TO BE PLACED IN THESE DESIGNATED AREAS AS STOCKPILED TOP SOIL SHALL BE PROTECTED FROM EROSION WITH APPROPRIATE EROSION CONTROL MEASURES AT ALL TIMES. ONCE THE EXCESS MATERIAL HAS BEEN PLACED AND COMPACTED THE TOP SOIL SHALL BE EVENLY REDISTRIBUTED ON TOP OF THE PLACED FILL BEFORE BEING REVEALED.
- REGRADEING WORK SHALL BE CLOSELY COORDINATED WITH THE OWNER AND ENGINEER BEFORE AND AS THE WORK IS BEING ACCOMPLISHED. ONCE STARTED, THIS WORK SHALL BE PROSECUTED WITH DILIGENCE UNTIL COMPLETE.
- ALL NEW WORK SHALL SLOPE UNIFORMLY BETWEEN SPOT ELEVATIONS UNLESS NOTED OTHERWISE. PROVIDE POSITIVE DRAINAGE ON ALL FINISH GRADES.
- MASS GRADING: MASS GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE RECOMMENDATIONS IN THE PRELIMINARY GEOTECHNICAL INVESTIGATIONS AS PROVIDED IN CONTRACT DOCUMENTS(BY REED ENGINEERING GROUP - REPORT #20164 DATED FEBRUARY 2015). COMPACTON OF ALL FILL MATERIAL SHALL BE A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D 698 OR AS REQUIRED IN THE PRELIMINARY GEOTECHNICAL INVESTIGATION. THE MOISTURE CONTENT OF ALL FILL MATERIAL SHALL BE NEAR ITS OPTIMUM MOISTURE CONTENT (ASTM D 698); DRY SOILS SHALL HAVE WATER ADDED AND WET SOILS SHALL BE AERATED, SO THAT ALL SOIL PLACEMENT WILL MEET DENSITY REQUIREMENTS.
- CLEARING AREAS TO BE FILLED: IN AREAS TO BE FILLED, ALL TREES, STUMPS, BRUSH, ABANDONED STRUCTURES, ROOTS, TOPSOIL, VEGETATION, SEDIMENTS, LARGE ROCK FRAGMENTS, RUBBISH, AND ANY OTHER UNDESIRABLE OR DELETERIOUS MATTER SHOULD BE PROPERLY REMOVED AND DISPOSED OF. ALL TOPSOIL, ROOTS, OTHER VEGETATION AND LOOSE OR SOFT SOILS SHOULD BE STRIPPED TO A DEPTH OF 6 INCHES AND THE EXPOSED SURFACE SHOULD BE SCARIFIED TO AN ADDITIONAL DEPTH OF AT LEAST 6 INCHES. TO THE EXTENT PRACTICAL, IT IS RECOMMENDED THAT TREES SCHEDULED FOR REMOVAL IN THE VICINITY OF PROPOSED SLAB-ON-GRADE FOUNDATIONS BE REMOVED AS FAR IN ADVANCE OF SLAB CONSTRUCTION AS POSSIBLE. THIS WILL TEND TO RESTORE A MORE FAVORABLE SOIL MOISTURE EQUILIBRIUM WHICH WILL, IN TURN, TEND TO MINIMIZE THE POTENTIAL FOR GREATER THAN ANTICIPATED POST-CONSTRUCTION GROUND MOVEMENTS. TREES SHOULD BE EXCAVATED TO BELOW THEIR ROOT BALLS, THEN THE EXCAVATION SHOULD BE FILLED WITH SOIL SIMILAR TO THE SURROUNDING SOIL. THE FILL SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE RECOMMENDATIONS PRESENTED IN THE PRELIMINARY GEOTECHNICAL INVESTIGATION.
- WATERING: WATERING OF EARTHWORK PLACED IN FILL AREAS MAY BE NECESSARY TO ACHIEVE THE SPECIFIED MOISTURE DENSITY REQUIREMENT, AND TO GERMINATE/SUSTAIN GRASS COVER IN AREAS TO RECEIVE A VEGETATIVE COVER. GRASSING IS NOT COMPLETE. THE CONTRACTOR MAY REQUEST A FIRE HYDRANT METER FROM THE CITY OF CELINA FOR CONSTRUCTION WATER USE OR OBTAIN WATER FROM AN ALTERNATE SOURCE. NO EXTRA PAYMENT WILL BE MADE TO THE CONTRACTOR FOR WATER.
- SWALE AND FINE GRADING OF LOTS: THE TOLERANCE FOR FINE GRADING OF THE LOT PADS AND OTHER AREAS UNDER THIS CONTRACT IS PLUS OR MINUS 0.30 FEET. SURFACES SHALL BE GRADED STRAIGHT AND SMOOTH BETWEEN CONTROL POINTS OR GRADES, WITHOUT BULGES OR DEPRESSIONS, AS DETAILED ON THE DRAWINGS. SEE REQUIREMENTS FOR TOPSOIL PLACEMENT IN NOTE #1 ABOVE.
- SWALES ARE TO BE GRADED AS SHOWN ON THE GRADING PLANS. FINE GRADING CONSISTS OF CREATING A SMOOTH FINISHED LEVEL HOUSE PAD WITH A UNIFORM TRANSITION TO SIDE YARD SWALES AND FRONT YARD SLOPES TO THE RIGHT-OF-WAY AND CURB.
- CONTRACTOR IS HEREBY DIRECTED TO ENSURE THAT ALL SWALES, AS SHOWN ON THE GRADING PLANS, ARE PROPERLY INSTALLED. AT LOCATIONS WHERE RETAINING WALLS EXIST AND/OR ARE PROPOSED BEHIND, BESIDE OR BETWEEN LOTS, SWALES MUST BE CREATED ON THE UPPER LOT DIRECTLY BEHIND THE WALL AND ON THE LOWER LOT ADJACENT TO THE WALL WHERE SHOWN TO CONVEY SURFACE DRAINAGE IN THE DIRECTION SHOWN ON THE GRADING PLAN.
- REESTABLISHMENT OF VEGETATION: ESTABLISHMENT OF VEGETATION SHALL BE INITIATED IMMEDIATELY AFTER COMPLETING GRADING AND IN NO CASE LATER THAN 14 DAYS AFTER COMPLETION OF GRADING. THE CONTRACTOR WILL BE REQUIRED TO BROADCAST SEED AND FERTILIZER ON FINISHED LOTS. TILLING WILL NOT BE REQUIRED. THE SEED MIX SHALL BE 50% UNHULLED BERMUODA AND 50% FOXTAIL MILLET-GERMAN STRAIN R APPLIED AT A RATE OF 10 LBS. PER ACRE. 10-10-10 FERTILIZER SHALL BE APPLIED AT THE RATE OF 200 LBS. PER ACRE OR AS RECOMMENDED BY THE FERTILIZER MANUFACTURER. THE UNIT PRICE BID FOR VEGETATION AND FERTILIZER ON FINISHED LOTS, INCLUDING ALL COSTS ASSOCIATED WITH PROVIDING AND SPREADING SEED AND FERTILIZER, THE VEGETATION MUST ACHIEVE A COVER THAT IS 70 PERCENT OF THE NATIVE BACKGROUND VEGETATIVE COVER TO BE CONSIDERED FINAL STABILIZATION.

STORM DRAINAGE CONSTRUCTION NOTES

- INLET BLOCKOUTS, VARIABLE CURB, AND INLET TOP WILL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY FOLLOWING PAVING OPERATIONS. INLET BLOCKOUTS SHALL BE PLACED 3.5 FEET FROM BACK OF CURB FOR A DISTANCE OF TEN (10) FEET UPSTREAM (BOTH SIDES IN SAG CONDITIONS) AND FIVE (5) FEET DOWNSTREAM OF THE INSIDE FACE OF INLET. UNLESS OTHERWISE NOTED IN CONSTRUCTION PLANS.
- STORM DRAINAGE PIPE AND HEADWALLS: UNLESS NOTED OTHERWISE ON THE PLANS, ALL STORM DRAINAGE PIPE SHALL BE CLASS III AND EMBEDMENT SHALL BE CLASS "B+" PER NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, STANDARD DRAWING NO. 3040. THE UNIT PRICE SUPPLIED FOR THE CONSTRUCTION OF THE STORM HEADWALLS SHALL INCLUDE VALUE FOR THE NECESSARY EXCAVATION/GRADE-TO-DRAIN ACTIVITY CONSIDERED SUBSIDIARY TO THE INSTALLATION OF THE STORM OUTFALL STRUCTURES. THE EXCAVATED CHANNEL SHALL HAVE A MINIMUM 1% LONGITUDINAL SLOPE AND MINIMUM BOTTOM WIDTH OF TWICE THE WIDTH OF THE OUTFALLING PIPE OR BOX, UNLESS OTHERWISE NOTED, AND SHALL HAVE THE EMBANKMENTS SLOPED BACK AT A 3:1 SLOPE.
- INLET BOTTOM CONSTRUCTION: WITHIN 24 HOURS OF THE COMPLETION OF THE CONSTRUCTED INLET BOTTOM, EROSION CONTROL MEASURES SHALL BE EMPLOYED AS SHOWN IN THE NCTCOG EROSION CONTROL DETAILS. INTERIM EROSION CONTROL MEASURES SHALL BE EMPLOYED UNTIL THE CONCRETE FOR THE INLET BASE HAS SET AND THE REQUIRED EROSION CONTROL MEASURES INSTALLED.
- ROCK RIP RAP: THE PLACEMENT OF ROCK RIP-RAP AT STORM DRAINAGE OUTFALLS WILL BE DELAYED UNTIL THE COMPLETION OF ALL UTILITY WORK. THE ROCK RIP-RAP MAY ALSO BE DESIGNATED FOR PLACEMENT ON THE FRESH EMBANKMENTS TO STABILIZE THE SLOPES.
- WATER AND SANITARY SEWER CONSTRUCTION NOTES

WATER AND SANITARY SEWER CONSTRUCTION NOTES

- FITTINGS ARE SUBSIDIARY TO THE UNIT PRICE FOR WATER LINE.
- FIRE HYDRANT ASSEMBLY: FIRE HYDRANT ASSEMBLY SHALL INCLUDE A 6" PVC LEAD, 6" VALVE, FITTINGS, CONCRETE BLOCKING, AND THE FIRE HYDRANT.
- WATER METERS: WATER METERS WILL BE SET AT A LATER DATE BY OTHERS. UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR MAKING THE TAP, INSTALLING THE COPPER SERVICE LINE PER NCTCOG STANDARD DETAILS, PROVIDING THE CURB STOP AND DEADHEAD VALVES, AND PROPERLY PLACING A METER BOX. LOCATOR PADS SHALL BE PLACED AT ALL VALVE LOCATIONS. THE LOCATOR PAD SHALL BECOME THE PROPERTY OF THE CITY. THE TERM "WATER METER BOX" AND "WATER METER CAN" ARE USED INTERCHANGEABLY.
- ALL VALVES, FIRE HYDRANTS, METER BOXES, SEWER SERVICES, SEWER MANHOLES, AND SEWER CLEANOUTS REQUIRE CURB MARKS PER CITY STANDARDS.

- ALL PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PWF-G) AS REQUIRED.
- THIS PROJECT SHALL COMPLY WITH CHANGES TO THE SAFE DRINKING WATER ACT THAT REDUCES MAXIMUM ALLOWABLE LEAD CONTENT IN PIPES, PIPE FITTINGS, PLUMBING FITTINGS AND FIXTURES TO 0.25 PERCENT.
- THE SYSTEM SHALL BE PROVIDED WITH SUFFICIENT VALVES AND BLOWOFFS SO THAT NECESSARY REPAIRS CAN BE MADE WITHOUT UNDUE INTERRUPTION OF SERVICE OVER ANY CONSIDERABLE AREA AND FOR FLUSHING THE SYSTEM WHEN REQUIRED.
- NEW MAINS SHALL BE THOROUGHLY DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651 AND THEN FLUSHED AND SAMPLED BEFORE BEING PLACED IN SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE. SAMPLING SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1000 FT OF COMPLETED WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING BEYOND 1000 FT AS DESIGNATED BY THE DESIGN ENGINEER AS REQUIRED.
- HYDROSTATIC LEAKAGE RATE FOR POLYVINYL CHLORIDE (PVC) PIPE SHALL NOT EXCEED AMOUNT ALLOWED OR RECOMMENDED BY AWWA FORMULA:
Q=L(DP^{0.75})/48,000
WHERE Q=QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR; L=LENGTH OF THE PIPE SECTION BEING TESTED; D=NOMINAL DIAMETER OF THE PIPE IN INCHES; AND P=AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).
- SANITARY SEWER STUB-OUTS FROM MANHOLES SHALL BE FITTED WITH WATER TIGHT STOPPER OR CAP.
- STUB-OUTS FROM MANHOLES SHALL BE A MINIMUM OF 5-FT LONG WITH CONCRETE CRADLE (FROM SAME POUR) UNDER THE ENTIRE LENGTH PER NCTCOG STANDARD DRAWING NO. 5020 AND 5030, DATED OCTOBER 2004, AND NCTCOG STANDARD DRAWING NO. 3010 CLASS "A" EMBEDMENT, DATED OCTOBER 2004.

UTILITY SEPARATION NOTES

- SEPARATION DISTANCES BETWEEN PUBLIC WATER SUPPLY PIPES AND SANITARY SEWER COLLECTION SYSTEMS OR MANHOLES MUST COMPLY WITH 30 TAC 217.53(D) AND 30TAC 290.44(E).
- COLLECTION SYSTEM PIPES MUST BE INSTALLED IN TRENCHES SEPARATE FROM PUBLIC WATER SUPPLY TRENCHES.
- COLLECTION SYSTEM PIPES MUST BE NO CLOSER THAN NINE FEET IN ANY DIRECTION TO A PUBLIC WATER SUPPLY LINE.
- WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING CRITERIA SHALL APPLY.
4.A. A MINIMUM SANITARY SEWER PIPE SEGMENT LENGTH SHALL BE AT LEAST 18-FEET WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED.
4.B. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, NON-PRESSURE RATED SANITARY SEWER MAIN OR LATERAL, ONE SEGMENT OF WATERLINE PIPE SHALL BE CENTERED OVER THE SANITARY SEWER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE SANITARY SEWER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE SANITARY SEWER MAIN OR LATERAL, WHENEVER POSSIBLE. THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE SANITARY SEWER MAIN OR LATERAL. IF THE EXISTING SANITARY SEWER MAIN OR LATERAL IS DISTURBED OR SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4.C. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED SANITARY SEWER MAIN OR LATERAL AND THE STANDARD PIPE SEGMENT LENGTH OF THE SANITARY SEWER MAIN OR LATERAL IS AT LEAST 18 FEET, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE SANITARY SEWER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE SANITARY SEWER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE SANITARY SEWER MAIN OR LATERAL, WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE SANITARY SEWER MAIN OR LATERAL. THE SANITARY SEWER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE SANITARY SEWER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END. WHERE SHOWN, THE SANITARY SEWER LINE SHALL BE CONSTRUCTED OF 150 PSI PRESSURE RATED PIPE.
4.D. WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE SANITARY SEWER MAIN OR LATERAL.
4.E. WHEN A NEW WATERLINE CROSSES UNDER A SANITARY SEWER MAIN OR LATERAL, ALL SECTIONS OF WATERLINE WITHIN NINE FEET HORIZONTALLY OF THE SANITARY SEWER MAIN OR LATERAL SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE SANITARY SEWER MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON-SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. IN LIEU OF THE ENCASEMENT, THE WATERLINE CAN ALSO BE CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE, AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE SANITARY SEWER MAIN OR LATERAL SHALL BE PROVIDED.
4.F. WATERLINE AND SANITARY SEWER MAIN OR LATERAL MANHOLE OR CLEANOUT SEPARATION: THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A SANITARY SEWER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET, WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT.
4.G. LOCATION OF FIRE HYDRANTS: FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY SANITARY SEWER MAIN, SANITARY SEWER LATERAL, OR SANITARY SEWER SERVICE LINE REGARDLESS OF CONSTRUCTION.



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

REVISIONS AND ISSUE DATES

LIGHT FARMS

GENERAL NOTES

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

SCALE	SHEET No.
DATE	2
OCT 2, 2015	

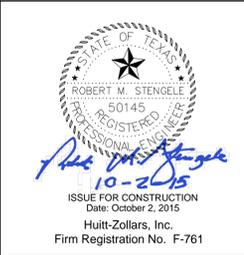
HUITT-ZOLLARS, Inc. Dallas
1717 McKinney Avenue, Suite 1400
Dallas, Texas 75202-1206
Phone (214) 871-3311 Fax (214) 871-0757

TCEQ WATER DISTRIBUTION GENERAL NOTES

- THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS, AT A MINIMUM, MEET TCEQ'S RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS.
- AN APPOINTED ENGINEER SHALL NOTIFY IN WRITING THE LOCAL TCEQ'S REGIONAL OFFICE WHEN CONSTRUCTION WILL START. PLEASE KEEP IN MIND THAT UPON COMPLETION OF THE WATER WORKS PROJECT, THE ENGINEER OR OWNER SHALL NOTIFY THE COMMISSION'S WATER SUPPLY DIVISION, IN WRITING, AS TO ITS COMPLETION AND ATTEST TO THE FACT THAT THE WORK HAS BEEN COMPLETED ESSENTIALLY ACCORDING TO THE PLANS AND CHANGE ORDERS ON FILE WITH THE COMMISSION AS REQUIRED IN 30 TAC §290.39(H)(3).
- ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD61-G AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI, AS REQUIRED BY 30 TAC §290.44(A)(1).
- PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL(NSF PW-G) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS, AS REQUIRED BY 30 TAC §290.44(A)(2).
- NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY, AS REQUIRED BY 30 TAC §290.44(A)(3).
- WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 25 INCHES BELOW GROUND SURFACE, AS REQUIRED BY 30 TAC §290.44(A)(4).
- PURSUANT TO 30 TAC §290.44(A)(5), THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.
 THE HYDROSTATIC LEAKAGE RATE FOR POLYVINYL CHLORIDE (PVC) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;
 WHERE:

$$[LD(P^0.5)]/148,000$$
 Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
 L=THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
 D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
 P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).
 THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-600 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;
 WHERE:

$$[SD(P^0.5)]/148,000$$
 L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
 S =THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
 D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
 P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).
- PROJECTS CONSTRUCTED ON OR AFTER JANUARY 1, 2014 MUST COMPLY WITH THE CHANGES TO THE SAFE DRINKING WATER ACT THAT REDUCE THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES TO 0.25 PERCENT.
- THE SYSTEM MUST BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 35 PSI AT ALL POINTS WITHIN THE DISTRIBUTION NETWORK AT FLOW RATES OF AT LEAST 1.5 GALLONS PER MINUTE PER CONNECTION. WHEN THE SYSTEM IS INTENDED TO PROVIDE FIREFIGHTING CAPABILITY, IT MUST ALSO BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSI UNDER COMBINED FIRE AND DRINKING WATER FLOW CONDITIONS AS REQUIRED BY 30 TAC §290.44(D).
- THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES IN THE DISTRIBUTION SYSTEM AT ALL POINTS WHERE TOPOGRAPHY OR OTHER FACTORS MAY CREATE AIR LOCKS IN THE LINES. ALL VENT OPENINGS TO THE ATMOSPHERE SHALL BE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT AS REQUIRED BY 30 TAC §290.44(D)(1).
- PURSUANT TO 30 TAC §290.44(D)(4), ACCURATE WATER METERS SHALL BE PROVIDED. SERVICE CONNECTIONS AND METER LOCATIONS SHOULD BE SHOWN ON THE PLANS.
- PURSUANT TO 30 TAC §290.44(D)(5), SUFFICIENT VALVES AND BLOWOFFS TO MAKE REPAIRS. THE ENGINEERING REPORT SHALL ESTABLISH CRITERIA FOR THIS DESIGN.
- PURSUANT TO 30 TAC §290.44(D)(6), THE SYSTEM SHALL BE DESIGNED TO AFFORD EFFECTIVE CIRCULATION OF WATER WITH A MINIMUM OF DEAD ENDS. ALL DEAD-END MAINS SHALL BE PROVIDED WITH ACCEPTABLE FLUSH VALVES AND DISCHARGE PIPING. ALL DEAD-END LINES LESS THAN TWO INCHES IN DIAMETER WILL NOT REQUIRE FLUSH VALVES IF THEY END AT A CUSTOMER SERVICE. WHERE DEAD ENDS ARE NECESSARY AS A STAGE IN THE GROWTH OF THE SYSTEM, THEY SHALL BE LOCATED AND ARRANGED TO ULTIMATELY CONNECT THE ENDS TO PROVIDE CIRCULATION.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES AND SEPTIC TANK DRAINFIELDS. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET 30 TAC §290.44(E)(1-4) OF THE CURRENT RULES.
- PURSUANT TO 30 TAC §290.44(E) (5), THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED O THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT.
- PURSUANT TO 30 TAC §290.44(E)(6), FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
- PURSUANT TO 30 TAC §290.44(E)(7), SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE.
- PURSUANT TO 30 TAC §290.44(E)(8), WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS.
- PURSUANT TO 30 TAC §290.44(F)(1), THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION.
- PURSUANT TO 30 TAC §290.44(F)(2), WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED.
- THE CONTRACTOR SHALL DISINFECT THE NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARD C-651 AND THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATER LINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER, IN ACCORDANCE WITH 30 TAC §290.44(F)(3).



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TCEQ GENERAL NOTES

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

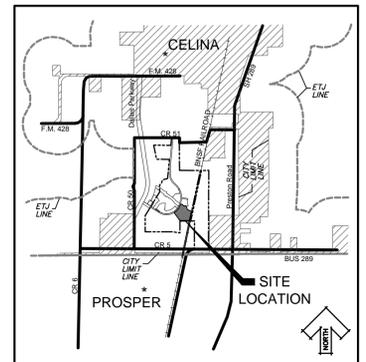
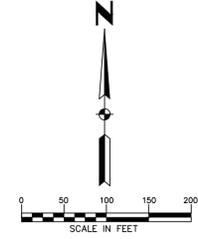
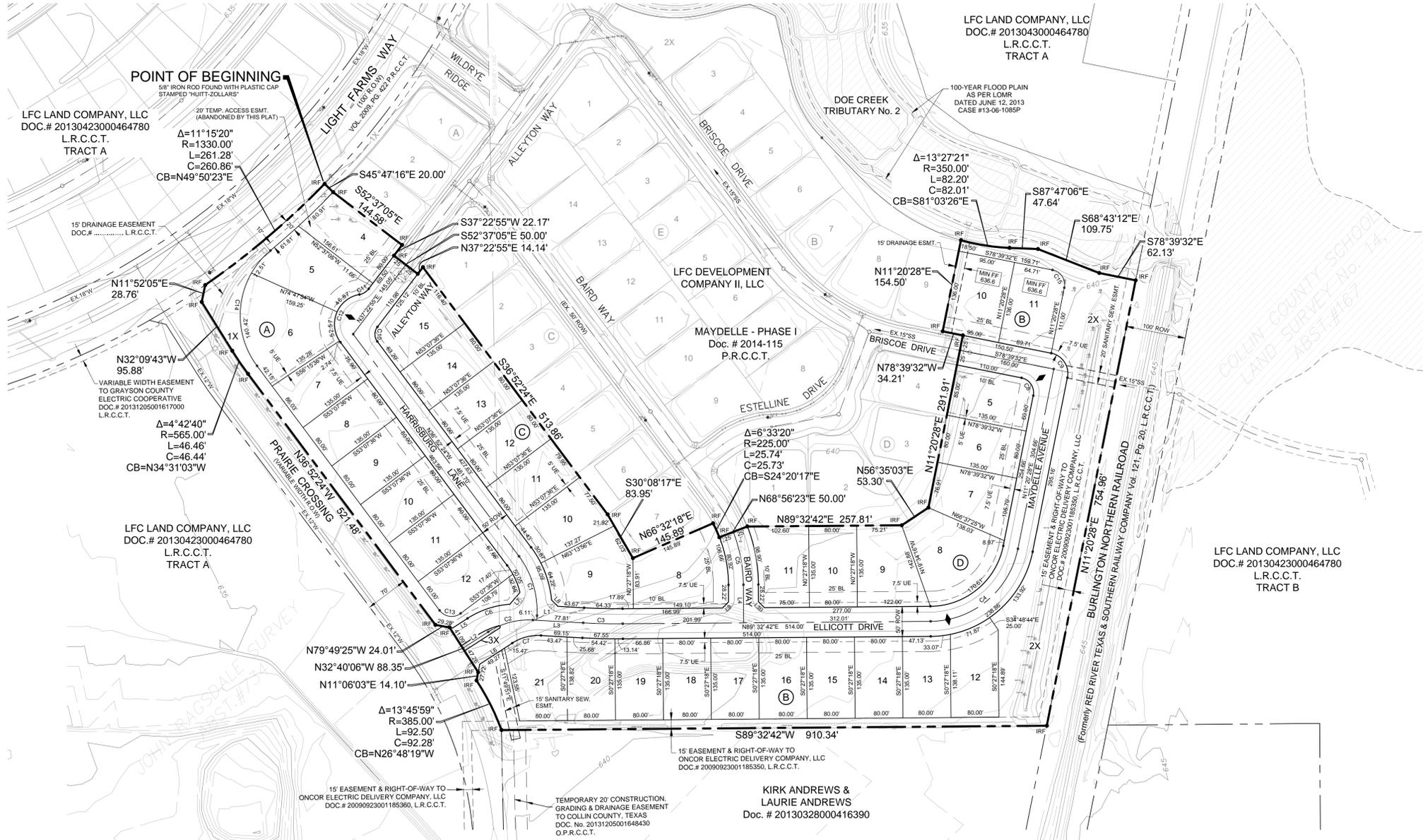
LFC LAND COMPANY, LLC

8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

 <small>Huitt-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757</small>	SCALE	SHEET No.
	DATE	3

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BLOCK A

LOT #	AREA
4	12,015 sq.ft. 0.28 ac.
5	15,750 sq.ft. 0.36 ac.
6	17,543 sq.ft. 0.40 ac.
7	11,115 sq.ft. 0.26 ac.
8	10,800 sq.ft. 0.25 ac.
9	10,800 sq.ft. 0.25 ac.
10	10,800 sq.ft. 0.25 ac.
11	10,800 sq.ft. 0.25 ac.
12	11,334 sq.ft. 0.26 ac.

BLOCK B

LOT #	AREA
12	12,018 sq.ft. 0.28 ac.
13	10,834 sq.ft. 0.25 ac.
14	10,800 sq.ft. 0.25 ac.
15	10,800 sq.ft. 0.25 ac.
16	10,800 sq.ft. 0.25 ac.
17	10,800 sq.ft. 0.25 ac.
18	10,800 sq.ft. 0.25 ac.
19	10,800 sq.ft. 0.25 ac.
20	10,925 sq.ft. 0.25 ac.
21	12,867 sq.ft. 0.30 ac.

BLOCK C

LOT #	AREA
8	17,714 sq.ft. 0.41 ac.
9	15,385 sq.ft. 0.35 ac.
10	11,833 sq.ft. 0.27 ac.
11	10,800 sq.ft. 0.25 ac.
12	10,800 sq.ft. 0.25 ac.
13	10,800 sq.ft. 0.25 ac.
14	10,800 sq.ft. 0.25 ac.
15	13,102 sq.ft. 0.30 ac.

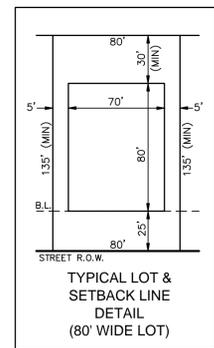
BLOCK D

LOT #	AREA
5	11,341 sq.ft. 0.26 ac.
6	10,800 sq.ft. 0.25 ac.
7	12,326 sq.ft. 0.28 ac.
8	17,454 sq.ft. 0.40 ac.
9	13,312 sq.ft. 0.31 ac.
10	10,800 sq.ft. 0.25 ac.
11	11,985 sq.ft. 0.28 ac.

OPEN SPACE

LOT #	AREA
1X	25,475 sq.ft. 0.58 ac.
2X	93,276 sq.ft. 2.14 ac.
3X	634 sq.ft. 0.01 ac.

- LEGEND**
- IRF — IRON ROD FOUND
 - IRF (H2) — 5/8" IRON ROD FOUND WITH PLASTIC CAP STAMPED "HUITT-ZOLLARS"
 - IRF — 5/8" IRON ROD SET W/ "HUITT-ZOLLARS" CAP
 - MIN. F.F. — MINIMUM FINISH FLOOR
 - WME — WALL MAINTENANCE EASEMENT
 - UE — UTILITY EASEMENT
 - BL — BUILDING LINE
 - ◆ — DENOTES STREET NAME CHANGE
 - L.R.C.C.T. — LAND RECORDS, COLLIN COUNTY, TEXAS
 - P.R.C.C.T. — PLAT RECORDS, COLLIN COUNTY, TEXAS



BASIC OF BEARINGS:
 THE BEARINGS SHOWN HEREON ARE NAD 1983 TIED TO THE TEXAS STATE PLAN COORDINATE SYSTEM OF 1983, NORTH CENTRAL TEXAS ZONE (4202).

CURVE	DELTA	RADIUS	LENGTH	CHORD	CHORD BEARING
C1	40°06'15"	150.00'	104.99'	102.86'	N16°49'15"W
C2	36°00'18"	125.00'	78.55'	77.26'	N75°13'42"E
C3	3°41'10"	1025.00'	65.94'	65.93'	S88°36'43"E
C4	78°12'14"	150.00'	204.74'	189.21'	N50°26'34"E
C5	20°36'19"	250.00'	89.91'	89.42'	S10°45'27"E
C6	28°48'10"	150.00'	75.41'	74.61'	N71°37'38"W
C7	36°00'18"	80.00'	50.27'	49.45'	N75°13'42"W
C8	90°00'00"	25.00'	39.27'	35.36'	S33°39'32"E
C9	90°00'00"	34.50'	54.19'	48.79'	S33°39'32"E
C10	74°15'18"	20.00'	25.92'	24.14'	N00°15'15"E
C11	42°50'00"	25.00'	18.69'	18.26'	S58°47'54"W
C12	117°05'18"	50.00'	102.18'	85.30'	S21°40'15"W
C13	90°00'00"	25.00'	39.27'	35.36'	S81°52'23"E
C14	87°08'34"	140.00'	212.93'	192.99'	N06°41'53"E
C15	90°00'00"	25.00'	39.27'	35.36'	S33°39'32"E

COURSE	DIRECTION	DISTANCE
L1	N03°13'52"E	7.63'
L2	N57°13'34"E	50.34'
L3	S86°46'08"E	83.92'
L4	S00°27'18"E	63.22'
L5	N57°13'34"E	29.21'
L6	N57°13'34"E	64.74'
L7	S40°15'13"W	25.93'
L8	S45°26'10"E	15.02'
L9	S44°32'42"W	14.14'
L10	S45°27'18"E	14.14'

- NOTES:**
- SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF CITY ORDINANCE AND STATE LAW, AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
 - THE CARE, OWNERSHIP, AND MAINTENANCE OF ALL COMMON AREA LOTS 1-X, 2X & 3X IS THE RESPONSIBILITY OF COLLIN COUNTY MUNICIPAL UTILITY DISTRICT No.1
 - ALL LOT CORNERS WILL BE SET UPON COMPLETION OF CONSTRUCTION USING A 5/8 INCH REBAR WITH A YELLOW PLASTIC CAP STAMPED "HUITT-ZOLLARS" IN AREAS WHERE IT IS NOT PHYSICALLY POSSIBLE TO SET REBAR, AN X CUT OR P.K. NAIL WILL BE UTILIZED. THE CENTERLINE OF THE STREET RIGHT-OF-WAY WILL BE MONUMENTED WITH A SCRIBED "X" IN CONCRETE AT P.C.'S, P.T.'S AND INTERSECTION POINTS.

CONSTRUCTION PLAT
LIGHT FARMS
THE MAYDELLE NEIGHBORHOOD-PHASE II
 CONTAINING
 36 RESIDENTIAL LOTS, 3 OPEN SPACES
 TOTALING 15.457 ACRES
 SITUATED IN THE
 JOHN RAGSDALE SURVEY, ABST. No. 734
 COLLIN COUNTY SCHOOL LAND SURVEY No. 14, ABST. No. 167
COLLIN COUNTY, TEXAS
 JUNE, 2015

DEVELOPER
LFC LAND COMPANY, LLC.
 8401 North Central Expressway, Suite 350, Dallas, TX 75225
 Phone 214-292-3410 Fax 214-292-3411

PREPARED BY:
HUITT-ZOLLARS
 Huitt-Zollars, Inc. Dallas
 1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
 Phone (214) 871-3311 Fax (214) 871-0757

CITY FILE No. P-201506-01

DWG: I:\proj\01390553-80\lans\DWG\PHASE II\SHEETS\01390553-C004-CONST PLAT.dwg USER: jgan
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OWNER'S CERTIFICATE
STATE OF TEXAS
COUNTY OF COLLIN

WHEREAS, LFC LAND COMPANY, LLC is the owner of a tract of land situated in the John Ragsdale Survey, Abstract No. 734 and in the Collin County School Land Survey No. 14, Abstract No. 167, Collin County, Texas, and being a portion of the 597.17 acres of land described as Tract A in instrument recorded under Document No. 20120423000464780 of Land Records of Collin County, Texas, and being more particularly described as follows:

BEGINNING at a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" on the southeasterly right-of-way line of Light Farms Way (a 100 foot wide right-of-way at this point as recorded in Volume 2009, Page 422 of the Plat Records of Collin County, Texas) at the southwest corner of Lot 1X, Block A of Maydelle - Phase 1, at Light Farms, an addition to Collin County, Texas within the extra-territorial jurisdiction of the City of Celina, Texas, as recorded in Document Number 2014-115 of the Plat Records of Collin County, Texas;

THENCE, departing the southeasterly right-of-way line of said Light Farms Way along the southerly line of said Maydelle - Phase 1 addition the following courses and distances:

South 45 degrees 47 minutes 16 seconds East a distance of 20.00 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

South 52 degrees 37 minutes 05 seconds East a distance of 144.58 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

South 37 degrees 23 minutes 36 seconds West a distance of 22.17 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

South 52 degrees 37 minutes 05 seconds East a distance of 50.00 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

North 37 degrees 22 minutes 55 seconds East a distance of 14.14 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

South 36 degrees 52 minutes 24 seconds East a distance of 513.86 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

South 30 degrees 08 minutes 17 seconds East a distance of 83.95 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

North 66 degrees 32 minutes 18 seconds East a distance of 145.89 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" at the beginning of a non-tangent curve to the right having a central angle of 06 degrees 33 minutes 20 seconds, with a radius of 225.00 feet, a chord bearing of South 24 degrees 20 minutes 17 seconds East, a chord length of 25.73 feet;

Along said curve to the right an arc length of 25.74 feet to a 5/8" iron rod found with plastic cap stamped "Huitt-Zollars";

North 68 degrees 56 minutes 23 seconds East a distance of 50.00 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

North 89 degrees 32 minutes 42 seconds East a distance of 257.81 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

North 56 degrees 35 minutes 03 seconds East a distance of 53.30 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

North 11 degrees 20 minutes 28 seconds East a distance of 241.91 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

North 11 degrees 20 minutes 28 seconds East a distance of 50.00 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

North 78 degrees 39 minutes 32 seconds West a distance of 34.21 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars";

North 11 degrees 20 minutes 28 seconds East a distance of 154.50 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" at the northeasterly corner of Maydelle - Phase 1 addition and being the beginning of a non-tangent curve to the left having a central angle of 13 degrees 27 minutes 20 seconds, with a radius of 350.00 feet, a chord bearing of South 81 degrees 03 minutes 26 seconds East, a chord length of 82.01 feet;

THENCE, departing the Maydelle - Phase 1 addition along said curve to the left an arc length of 82.20 feet to a 5/8" iron rod set with plastic cap stamped "Huitt-Zollars";

THENCE, South 87 degrees 47 minutes 06 seconds East a distance of 47.64 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars";

THENCE, South 68 degrees 43 minutes 12 seconds East a distance of 109.75 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars";

THENCE, South 78 degrees 39 minutes 32 seconds East a distance of 62.13 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" on the westerly right-of-way line of the Red River Texas & Southern Railway Company Railroad (currently Burlington Northern Santa Fe Railroad), a 100.0 foot wide right-of-way, by deed recorded in Volume 121, Page 20, L.R.C.C.T.;

THENCE, South 11 degrees 20 minutes 28 seconds West along the westerly right-of-way line of said Red River Texas & Southern Railway Company Railroad, a distance of 754.96 feet to a 1/2 inch iron rod found at a southeast corner of the LFC Land Company tract;

THENCE, South 89 degrees 32 minutes 42 seconds West departing the westerly right-of-way line of said Red River Texas & Southern Railway Company Railroad and along the a south line of the LFC Land Company tract, a distance of 910.34 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" on the proposed easterly right-of-way line of Prairie Crossing, a 75.0 foot wide right-of-way, and being the beginning of a non-tangent curve to the left having a central angle of 13 degrees 45 minutes 59 seconds, with a radius of 385.00 feet, a chord bearing of North 26 degrees 48 minutes 19 seconds West, a chord length of 92.28 feet;

THENCE, along the proposed northeasterly right-of-way line of Prairie Crossing the following courses and distances:

Along said curve to the left an arc length of 92.50 feet to a 5/8" iron rod set with plastic cap stamped "Huitt-Zollars";

North 11 degrees 06 minutes 03 seconds East a distance of 14.10 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars";

North 32 degrees 40 minutes 06 seconds West a distance of 88.35 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars";

North 79 degrees 49 minutes 25 seconds West a distance of 24.01 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars";

North 36 degrees 52 minutes 24 seconds West a distance of 521.48 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the right having a central angle of 04 degrees 42 minutes 40 seconds, with a radius of 565.00 feet, a chord bearing of North 34 degrees 31 minutes 03 seconds West, a chord length of 46.44 feet;

Along said curve to the right an arc length of 46.46 feet to a 5/8" iron rod set with plastic cap stamped "Huitt-Zollars";

North 32 degrees 09 minutes 43 seconds West a distance of 95.88 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars";

North 11 degrees 52 minutes 05 seconds East a distance of 28.76 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" in the said southeasterly right-of-way line of Light Farms Way and being the beginning of a non-tangent curve to the left having a central angle of 11 degrees 15 minutes 20 seconds, with a radius of 1,330.00 feet, a chord bearing of North 49 degrees 50 minutes 24 seconds East, a chord length of 260.86 feet;

THENCE, along the southeasterly right-of-way line of Light Farms Way along the southeasterly right-of-way line of Light Farms Way and curve an arc length of 261.28 feet to the POINT OF BEGINNING and CONTAINING 15.457 acres of land, more or less.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That LFC LAND COMPANY, LLC, acting herein by and through his(its) duly authorized officer(s), does hereby adopt this plat designating the herein above described property as THE MAYDELLE NEIGHBORHOOD-PHASE II, additions within the extra-territorial jurisdiction of the City of Celina, Texas, and does hereby dedicate, in fee simple, to the public use forever, the streets, rights-of-way, and other public improvements shown thereon. The streets and alleys, if any, are dedicated for street purposes. The easements and public use areas, as shown, are dedicated, for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs or other improvements or growths shall be constructed or placed upon, over or across the easements as shown, except that landscape improvements may be placed in landscape easements, if approved by the City Council of the City of Celina. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easements limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Celina's use thereof. The City of Celina and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements, The City of Celina and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time procuring permission from anyone.

This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Celina, Texas,

WITNESS, my hand, this the ____ day of _____, 2015.

By:

Authorized Signature of LFC LAND COMPANY, LLC.

Printed Name and Title, Guarantor

STATE OF TEXAS
COUNTY OF _____

Before me, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, Owner, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this ____ day of _____, 2015.

Notary Public in and for the State of Texas

My Commission Expires On: _____

WITNESS, my hand, this the ____ day of _____, 2015.

By:

Authorized Signature of
COLLIN COUNTY MUNICIPAL UTILITY DISTRICT No. 1

Printed Name and Title, Owner

STATE OF TEXAS
COUNTY OF _____

Before me, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, Owner, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this ____ day of _____, 2015.

Notary Public in and for the State of Texas

My Commission Expires On: _____

PREPARERS CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

THAT, I, Eric J. Yahoudy do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my personal supervision, in accordance with the subdivision regulations of the City of Celina, Texas.

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE, AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

Eric J. Yahoudy, Registered Professional Land Surveyor
Texas Registration No. 4862

Date _____

STATE OF TEXAS
COUNTY OF DALLAS

Before me, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Eric J. Yahoudy, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this ____ day of _____, 2015.

Notary Public in and for the State of Texas _____

My Commission Expires On: _____

PROPERTY LOCATION STATEMENT

This property is located in the extraterritorial jurisdiction of the City of Celina, Collin County, Texas.

Signature of Mayor _____

Date of approval _____

ATTEST:

City Secretary _____

Date _____

Approved for preparation of final plat following construction of all public improvements (or appropriate sureties thereof) necessary for the subdivision shown on the plat.

RECOMMENDED BY: Planning and Zoning Commission
City of Celina, Texas

Signature of Chairperson _____

Date of Recommendation _____

APPROVED BY:

City Council
City of Celina, Texas

Signature of Mayor _____

Date of Approval _____

ATTEST:

City Secretary _____

CONSTRUCTION PLAT
LIGHT FARMS
THE MAYDELLE NEIGHBORHOOD-PHASE II
CONTAINING
36 RESIDENTIAL LOTS, 3 OPEN SPACES
TOTALING 15.457 ACRES
SITUATED IN THE
JOHN RAGSDALE SURVEY, ABST. No. 734
COLLIN COUNTY SCHOOL LAND SURVEY No. 14, ABST. No. 167
COLLIN COUNTY, TEXAS
JUNE, 2015

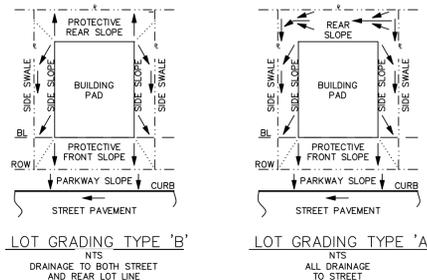
DEVELOPER
LFC LAND COMPANY, LLC.
8401 North Central Expressway, Suite 350, Dallas, TX 75225
Phone 214-292-3410 Fax 214-292-3411

PREPARED BY:
HUITT-ZOLLARS
Huitt-Zollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
Phone (214) 871-3311 Fax (214) 871-0757

CITY FILE No. P-201506-01

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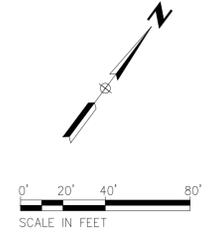
CAUTION!
 EXISTING GAS & UNDERGROUND
 ELECTRIC LINE IN THIS AREA
 CONTACT:
 TEXAS ONE CALL: 1-800-245-4545
 48 HOURS PRIOR TO CONSTRUCTION



NOTE:
 ALL DISTURBED AREAS MUST BE PERMANENTLY
 STABILIZED BY HYDROMULCH OR BROADCAST SEEDING
 PER NCTGG STANDARDS TO REESTABLISH VEGETATION
 UNDER THE DIRECTION OF THE ENGINEER / DEVELOPER.

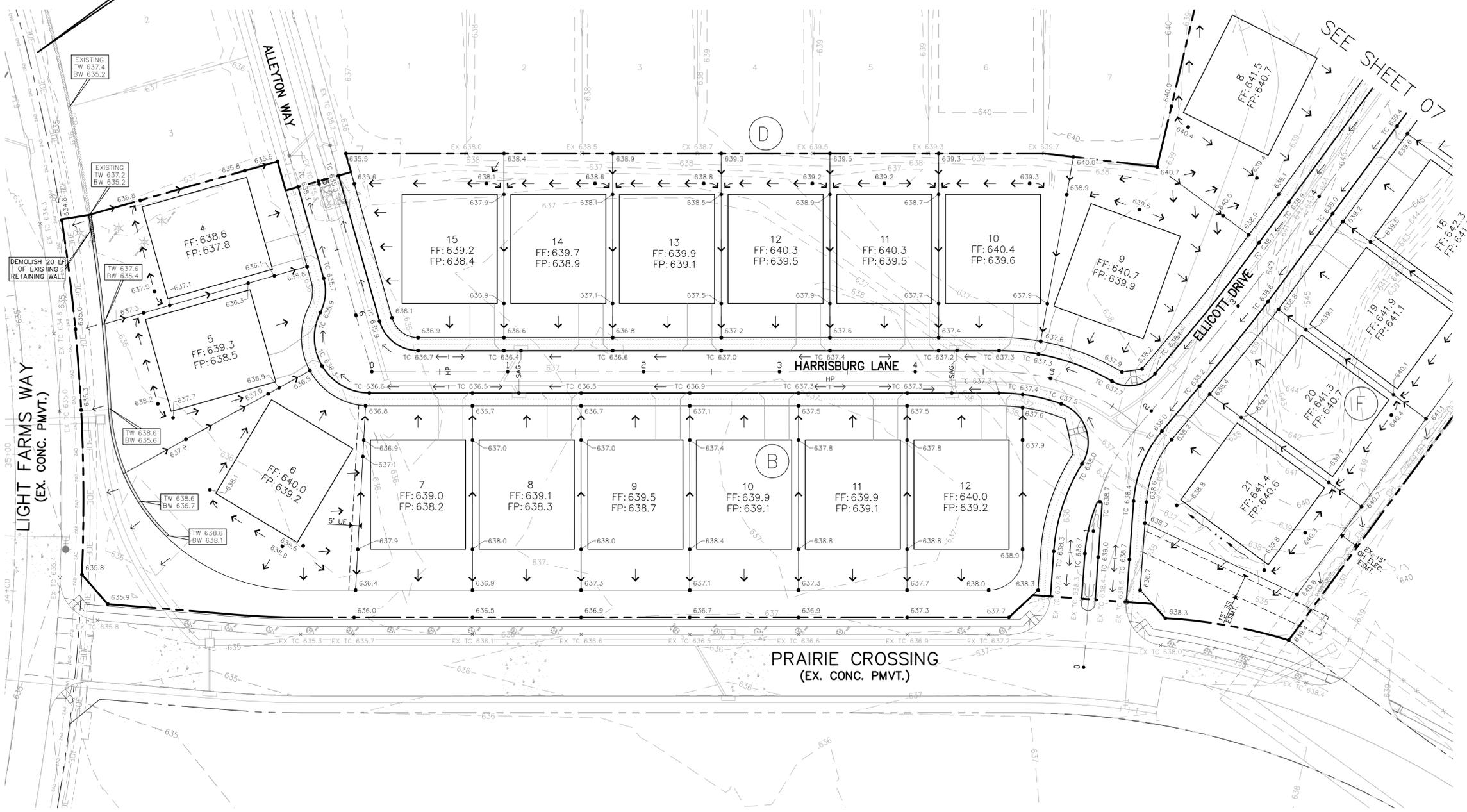
NOTE:
 TOP OF CURB GRADES ARE SHOWN TO THE NEAREST TENTH OF A
 FOOT FOR GRADING PURPOSES

NOTE:
 RETAINING WALL CONTRACTOR SHALL CONSTRUCT STONE
 GRAVITY WALL PER ENGINEERED SUBMITTAL APPROVED BY
 DISTRICT ENGINEER.



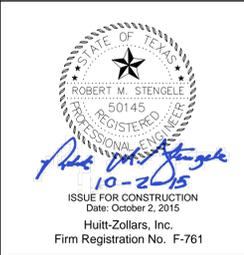
LEGEND

---	EXISTING CONTOUR
EX TC 633.7	EXISTING TOP CURB ELEVATION
• 635.8	PROPOSED SPOT ELEVATION
TC 635.8	PROPOSED TOP CURB ELEVATION
→	SURFACE FLOW DIRECTION
FP	FINISH PAD ELEVATION
---	PROPOSED RETAINING WALL
---	EXISTING RETAINING WALL
---	DEMOLISH EX. RETAINING WALL
TW 638.7	TOP OF WALL ELEVATION
BW 634.2	BOTTOM OF WALL ELEVATION
---	BOUNDARY
---	PROP. SWALE



BASIS OF VERTICAL DATUM -
 NAVD 1988 based on National
 Geodetic Survey Benchmarks
 N-185 (Elevation 650.78') and
 H263 (Elevation - 643.81')

BENCHMARKS:
BM # 79 - Brass monument set on
 top of curb, southeast side of Light
 Farms Way, 520+- feet
 southwesterly from the centerline
 of Wildrye Ridge.
Elev. = 634.45'
BM # 80 - Brass monument set on
 curb inset, southeast side of Light
 Farms Way, 79+- feet
 northeasterly from the centerline of
 Wildrye Ridge.
Elev. = 633.47'



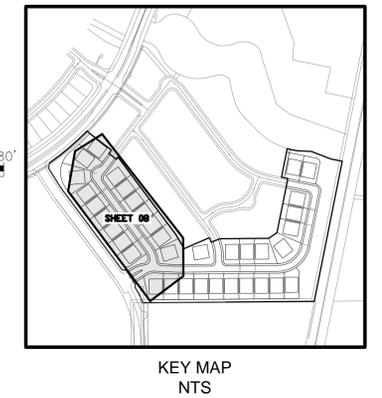
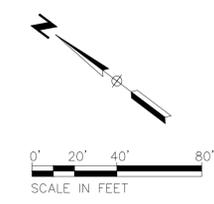
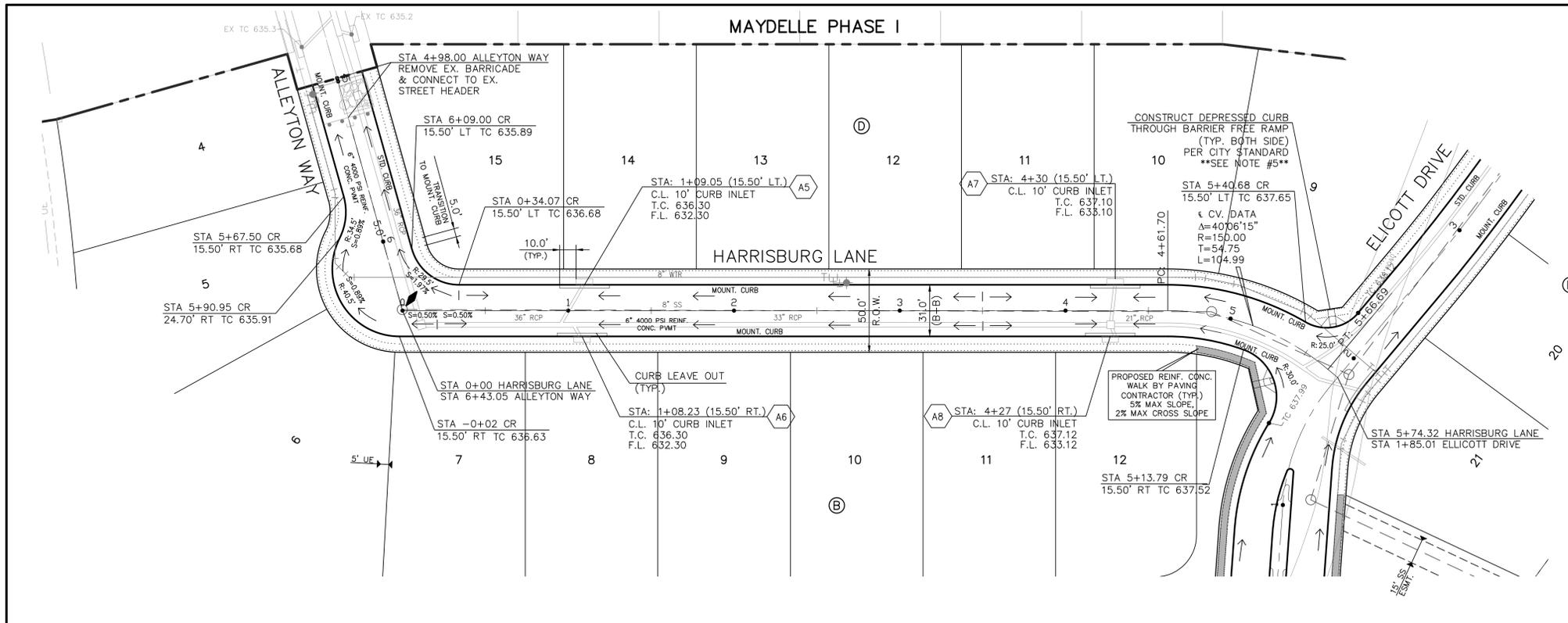
10/2/15	ISSUE FOR CONSTRUCTION	
DATE	DESCRIPTION	REV. No.
REVISIONS AND ISSUE DATES		

LIGHT FARMS
 GRADING PLAN
 MAYDELLE NEIGHBORHOOD - PH 2
 COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO. 1
 COLLIN COUNTY, TEXAS
LFC LAND COMPANY, LLC
 8401 North Central Expressway, Suite 350, Dallas, Texas 75225
 Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS
 Huitt-Zollars, Inc. Dallas
 1717 McKinney Avenue, Suite 1400
 Dallas, Texas 75202-1236
 Phone (214) 871-3311 Fax (214) 871-0757

SCALE
 1" = 40'
 DATE
 OCT 2, 2015

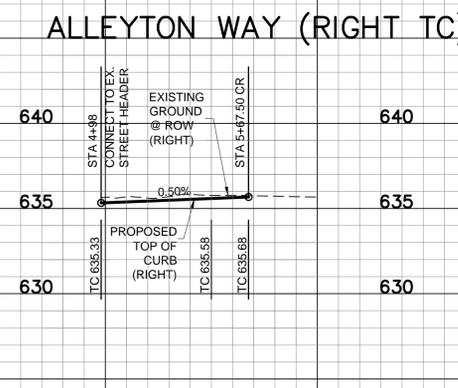
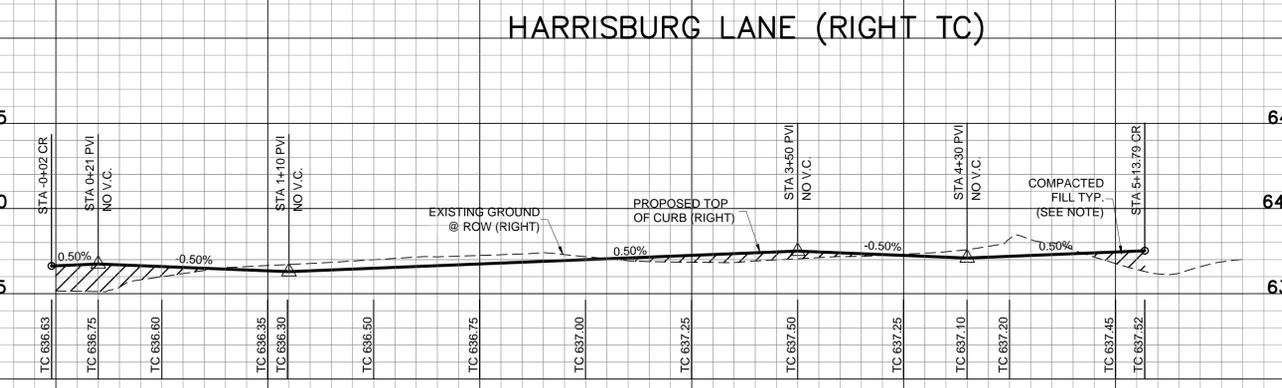
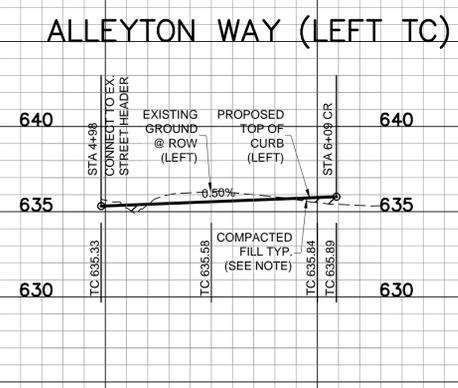
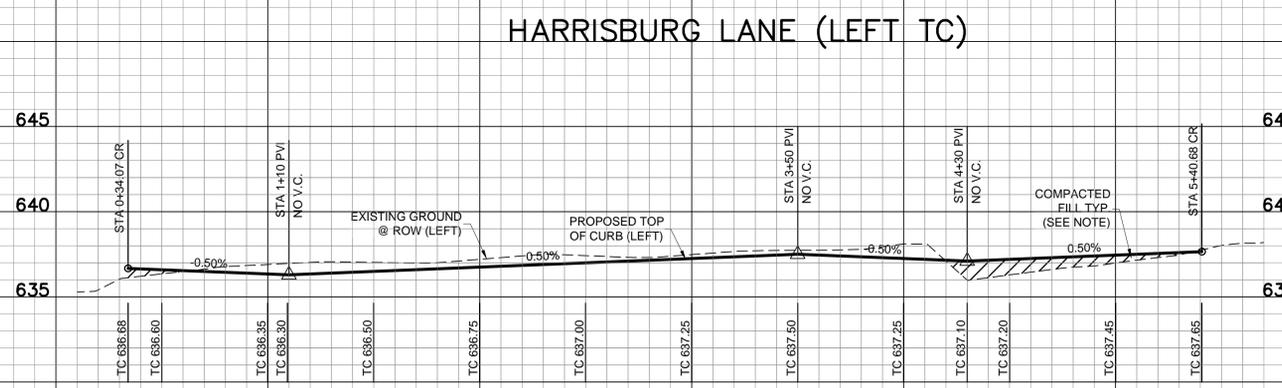
SHEET No.
 6



LEGEND

	BARRIER FREE RAMP
	HOMEBUILDER SIDEWALK
	FLOW DIRECTION
	CHANGE OF STREET NAME
	DENOTES INLET No. REFER TO DRAINAGE CALCULATIONS (INLET DESIGN) FOR DATA.
	SIDEWALK BY PAVING CONTRACTOR

- PAVING NOTES:**
- SEE DETAIL SHEET 20 AND 21 FOR TYPICAL PAVEMENT SECTIONS.
 - ALL PAVEMENT DIMENSIONS ARE FROM BACK OF CURB.
 - ALL CURBS WILL BE 4000 PSI REINFORCED CONCRETE MOUNTABLE CURB, EXCEPT AS NOTED (SEE STD. & MOUNTABLE CURB DETAILS SHT. 20)
 - TYPICAL STREET WITH 31" B-B TO BE 6" PARABOLIC CROWN.
 - PAVERS WITHIN BARRIER FREE RAMPS SHALL BE PAVESTONE ADA PAVERS. (TERA COTTA BLEND)
 - COMPACTED FILL TO 95% STANDARD PROCTOR DENSITY.
 - PARABOLIC CROWNS SHALL BE REDUCED THROUGH INTERSECTIONS AS FOLLOWS:
 - 6" CROWN: 30' TRANSITION PRIOR TO CURB RETURN, 3' THROUGH INTERSECTION, 30' TRANSITION AFTER CURB RETURN.
 - REFER TO SHEETS 20, 21, 25 AND 26 FOR PAVING STANDARD DETAILS.
- SIDEWALK NOTES:**
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS & ORDINANCES.
 - CONTRACTOR TO PROVIDE 4'x4' MOCK-UP FOR FINAL APPROVAL BY GUARANTOR AND LANDSCAPE ARCHITECT. MOCK-UP COSTS ARE SUBSIDIARY TO THE COST OF THE SIDEWALK.



BASIS OF VERTICAL DATUM -
NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.61')

BENCHMARKS:

BM # 79 - Brass monument set on top of curb, southeast side of Light Farms Way, 520+- feet southwesterly from the centerline of Wildrye Ridge.
Elev. = 634.45'

BM # 80 - Brass monument set on curb inlet, southeast side of Light Farms Way, 79+- feet northeasterly from the centerline of Wildrye Ridge.
Elev. = 633.47'

ISSUE FOR CONSTRUCTION
Date: October 2, 2015
Huitt-Zollars, Inc.
Firm Registration No. F-761

DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

REVISIONS AND ISSUE DATES

LIGHT FARMS
PAVING PLAN & PROFILE ALLEYTON WAY & HARRISBURG LANE

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS
Huitt-Zollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400
Dallas, Texas 75202-1236
Phone (214) 871-3311 Fax (214) 871-0757

SCALE
H: 1" = 40'
V: 1" = 5'

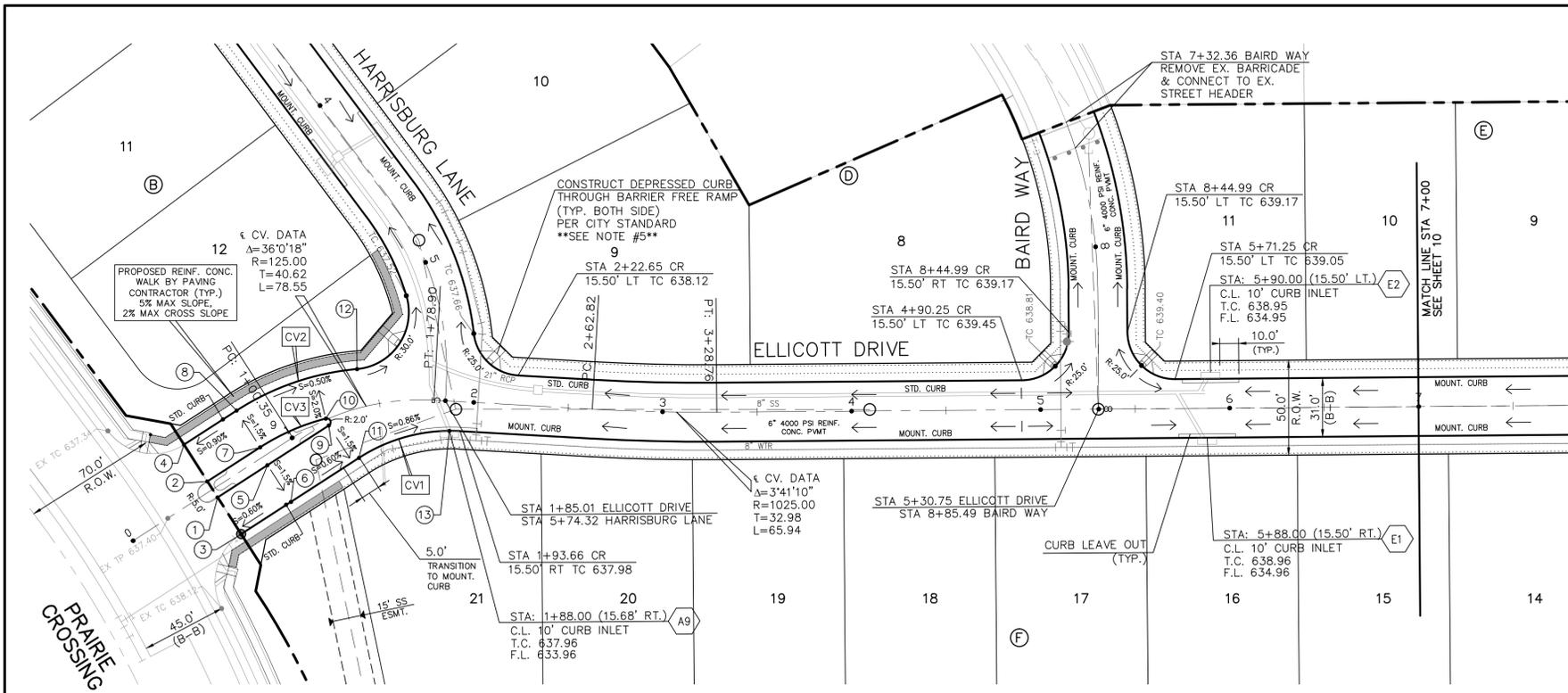
DATE
OCT 2, 2015

SHEET No.
8

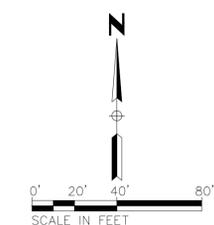
CITY PROJECT NUMBER: P-201506-01 PROJECT NUMBER: R013905-53

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- ① 0+49.92 (5.0 R) EX. TC 638.58
- ② 0+49.92 (5.0 L) EX. TC 638.31
- ③ 0+49.20 (28.0 R) EX. TC 638.48
- ④ 0+50.02 (28.0 L) EX. TC 638.03
- ⑤ 0+81.23 (5.0 R) TC 639.02
- ⑥ 0+81.23 (28.0 R) TC 638.67
- ⑦ 0+83.15 (5.0 L) TC 638.68
- ⑧ 0+83.15 (28.0 L) TC 638.33
- ⑨ 1+20.53 (3.42 R) TC 638.78
- ⑩ 1+20.53 (0.53 L) TC 638.59
- ⑪ 1+30.31 (25.15 R) TC 638.41
- ⑫ 1+42.64 (20.10 L) TC 637.99
- ⑬ 1+88.00 (15.68 R) TC 637.96



KEY MAP
NTS

CV1	CV2	CV3
CURVE DATA: $\Delta = 32'22.40"$ $R = 69.50'$ $T = 22.94'$ $L = 50.58'$	CURVE DATA: $\Delta = 27'43'24"$ $R = 140.50'$ $T = 34.67'$ $L = 67.98'$	CURVE DATA: $\Delta = 18'32'56"$ $R = 117.5'$ $T = 19.19'$ $L = 38.04'$

LEGEND	
	BARRIER FREE RAMP
	HOMEBUILDER SIDEWALK
	FLOW DIRECTION
	CHANGE OF STREET NAME
	DENOTES INLET No. REFER TO DRAINAGE CALCULATIONS (INLET DESIGN) FOR DATA.
	SIDEWALK BY PAVING CONTRACTOR

- PAVING NOTES:
- SEE DETAIL SHEET 20 AND 21 FOR TYPICAL PAVEMENT SECTIONS.
 - ALL PAVEMENT DIMENSIONS ARE FROM BACK OF CURB.
 - ALL CURBS WILL BE 4000 PSI REINFORCED CONCRETE MOUNTABLE CURB. EXCEPT AS NOTED (SEE STD. & MOUNTABLE CURB DETAILS SHT. 20)
 - TYPICAL STREET WITH 31" B-B TO BE 6" PARABOLIC CROWN.
 - PAVERS WITHIN BARRIER FREE RAMP SHALL BE PAVESTONE ADA PAVERS. (TERA COTTA BLEND)
 - COMPACTED FILL TO 95% STANDARD PROCTOR DENSITY.
 - PARABOLIC CROWNS SHALL BE REDUCED THROUGH INTERSECTIONS AS FOLLOWS:
 - 6" CROWN: 30' TRANSITION PRIOR TO CURB RETURN, 3' THROUGH INTERSECTION, 30' TRANSITION AFTER CURB RETURN.
 - REFER TO SHEETS 20, 21, 25 AND 26 FOR PAVING STANDARD DETAILS.
- SIDEWALK NOTES:
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS & ORDINANCES.
 - CONTRACTOR TO PROVIDE 4'x4' MOCK-UP FOR FINAL APPROVAL BY GUARANTOR AND LANDSCAPE ARCHITECT. MOCK-UP COSTS ARE SUBSIDIARY TO THE COST OF THE SIDEWALK.

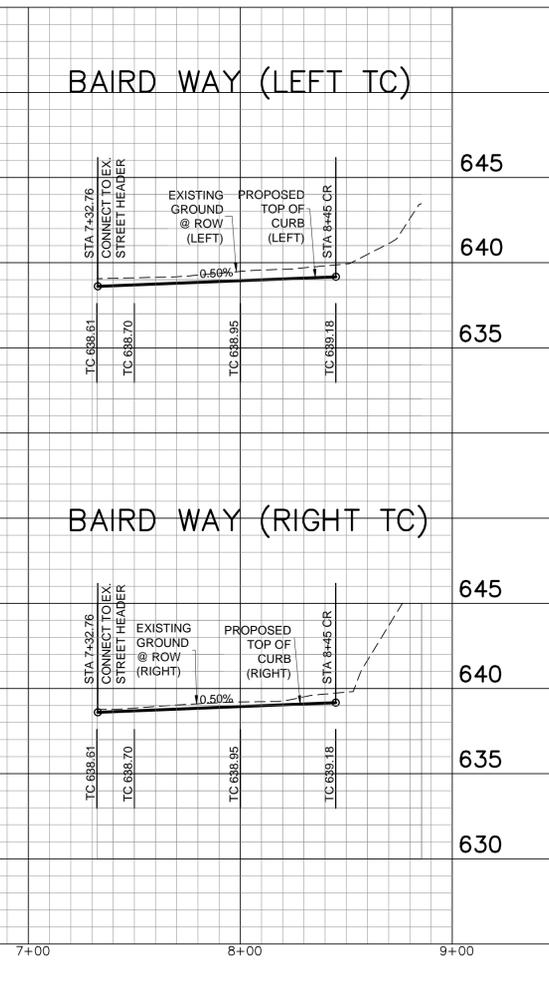
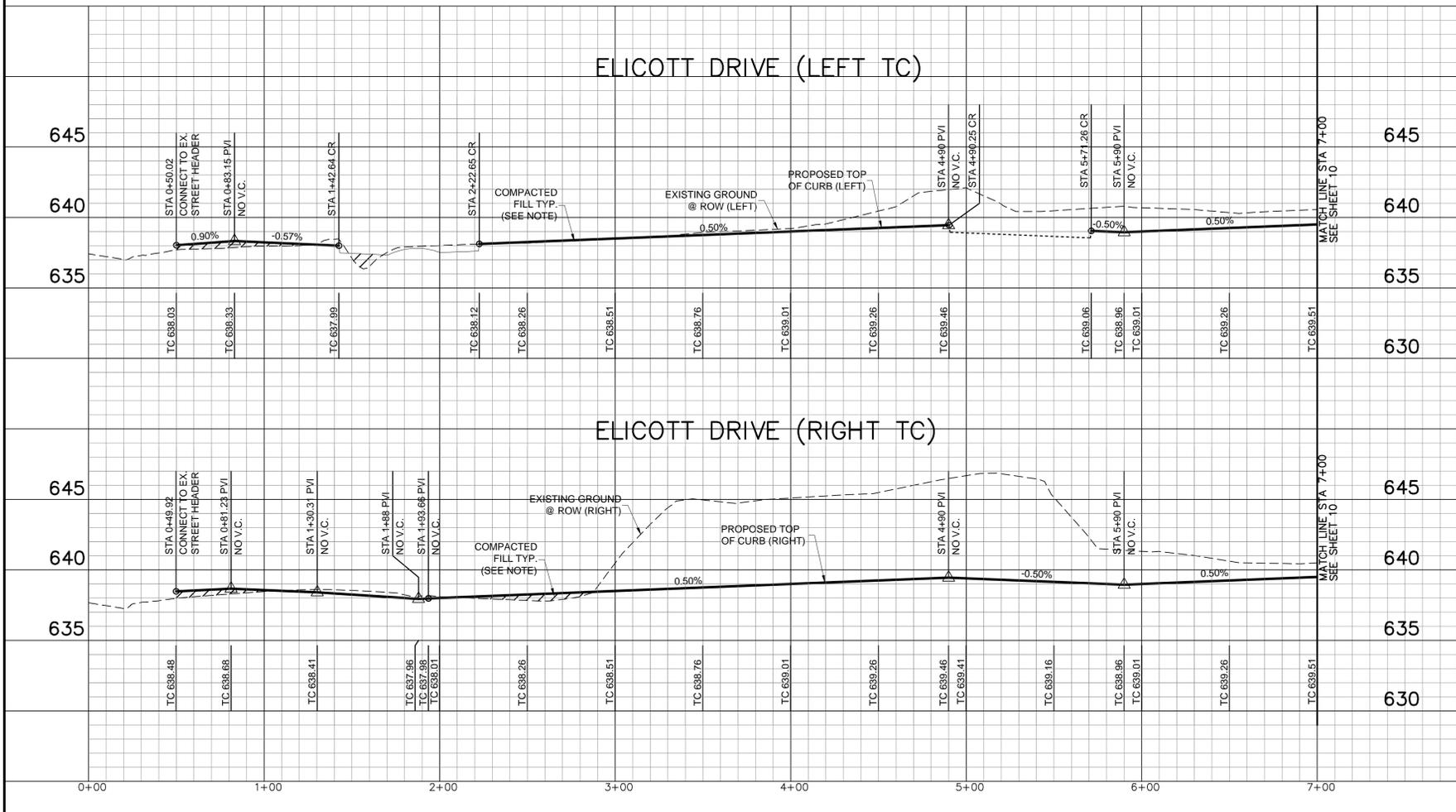
BASIS OF VERTICAL DATUM - NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.61')

BENCHMARKS:

BM # 79 - Brass monument set on top of curb, southeast side of Light Farms Way, 520+- feet southwesterly from the centerline of Wildrye Ridge.
Elev. = 634.45'

BM # 80 - Brass monument set on curb inlet, southeast side of Light Farms Way, 79+- feet northeasterly from the centerline of Wildrye Ridge.
Elev. = 633.47'

ISSUE FOR CONSTRUCTION
Date: October 2, 2015
Huitt-Zollars, Inc.
Firm Registration No. F-761



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

REVISIONS AND ISSUE DATES

LIGHT FARMS
PAVING PLAN & PROFILE
ELLICOTT DRIVE & BAIRD WAY

MAYDELLE NEIGHBORHOOD - PH 2
COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO. 1

COLLIN COUNTY, TEXAS
LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS
Huitt-Zollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400
Dallas, Texas 75202-1236
Phone (214) 871-3311 Fax (214) 871-0757

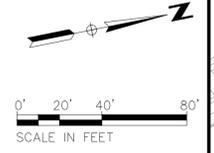
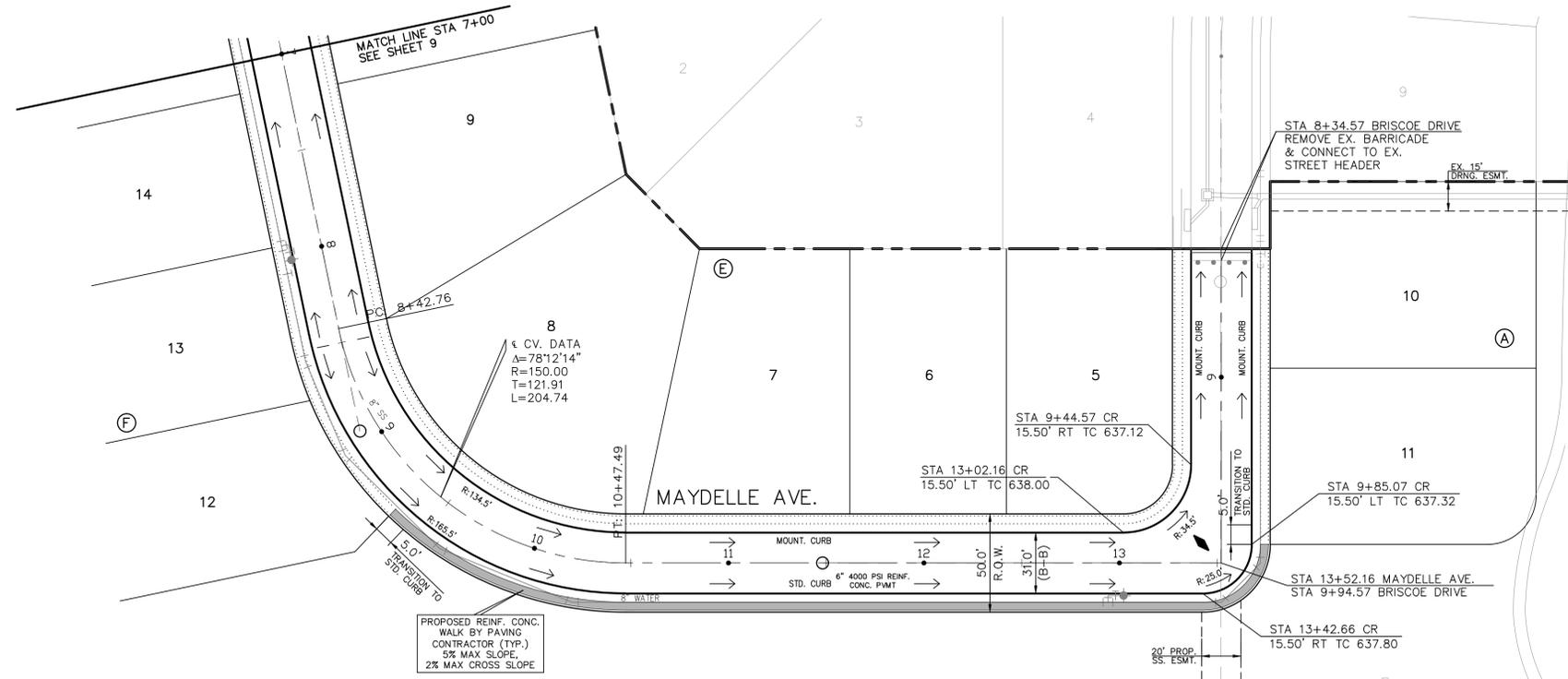
SCALE
H: 1" = 40'
V: 1" = 5'

DATE
OCT 2, 2015

SHEET No.
9

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KEY MAP
NTS

LEGEND	
	BARRIER FREE RAMP
	HOMEBUILDER SIDEWALK
	FLOW DIRECTION
	CHANGE OF STREET NAME
	DENOTES INLET No. REFER TO DRAINAGE CALCULATIONS (INLET DESIGN) FOR DATA.
	SIDEWALK BY PAVING CONTRACTOR

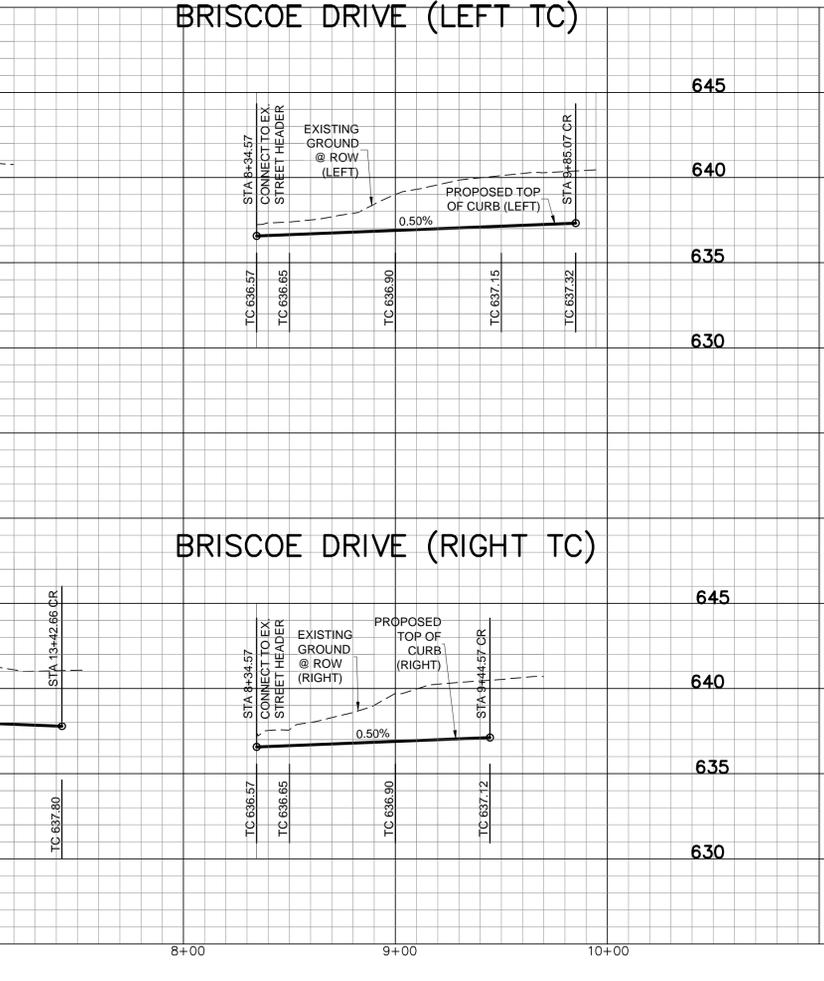
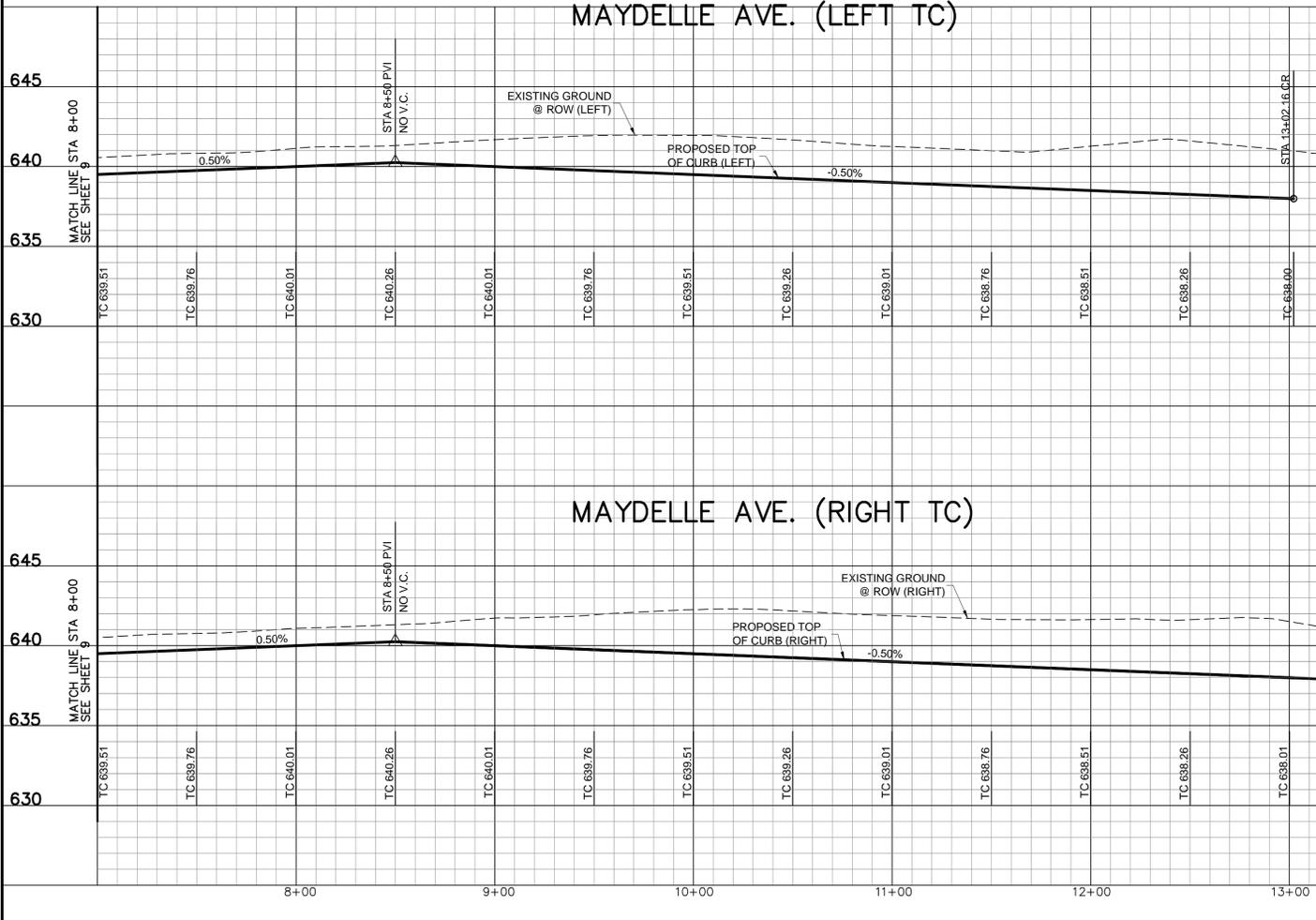
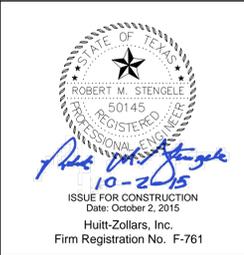
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BASIS OF VERTICAL DATUM - NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.61')

BENCHMARKS:

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Elev. = 634.45'

BM # 80 - Brass monument set on curb inlet, southeast side of Light Farms Way, 79+- feet northeasterly from the centerline of Wildrye Ridge.
Elev. = 633.47'



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

REVISIONS AND ISSUE DATES

LIGHT FARMS

PAVING PLAN & PROFILE MAYDELLE AVE. & BRISCOE DRIVE
MAYDELLE NEIGHBORHOOD - PH 2
COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO. 1

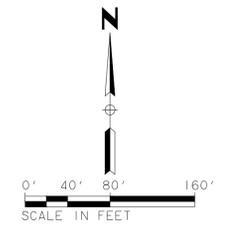
COLLIN COUNTY, TEXAS
LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS
Huitt-Zollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400
Dallas, Texas 75202-1236
Phone (214) 871-3311 Fax (214) 871-0757

SCALE
H: 1" = 40'
V: 1" = 5'
DATE
OCT 2, 2015
SHEET No.
10

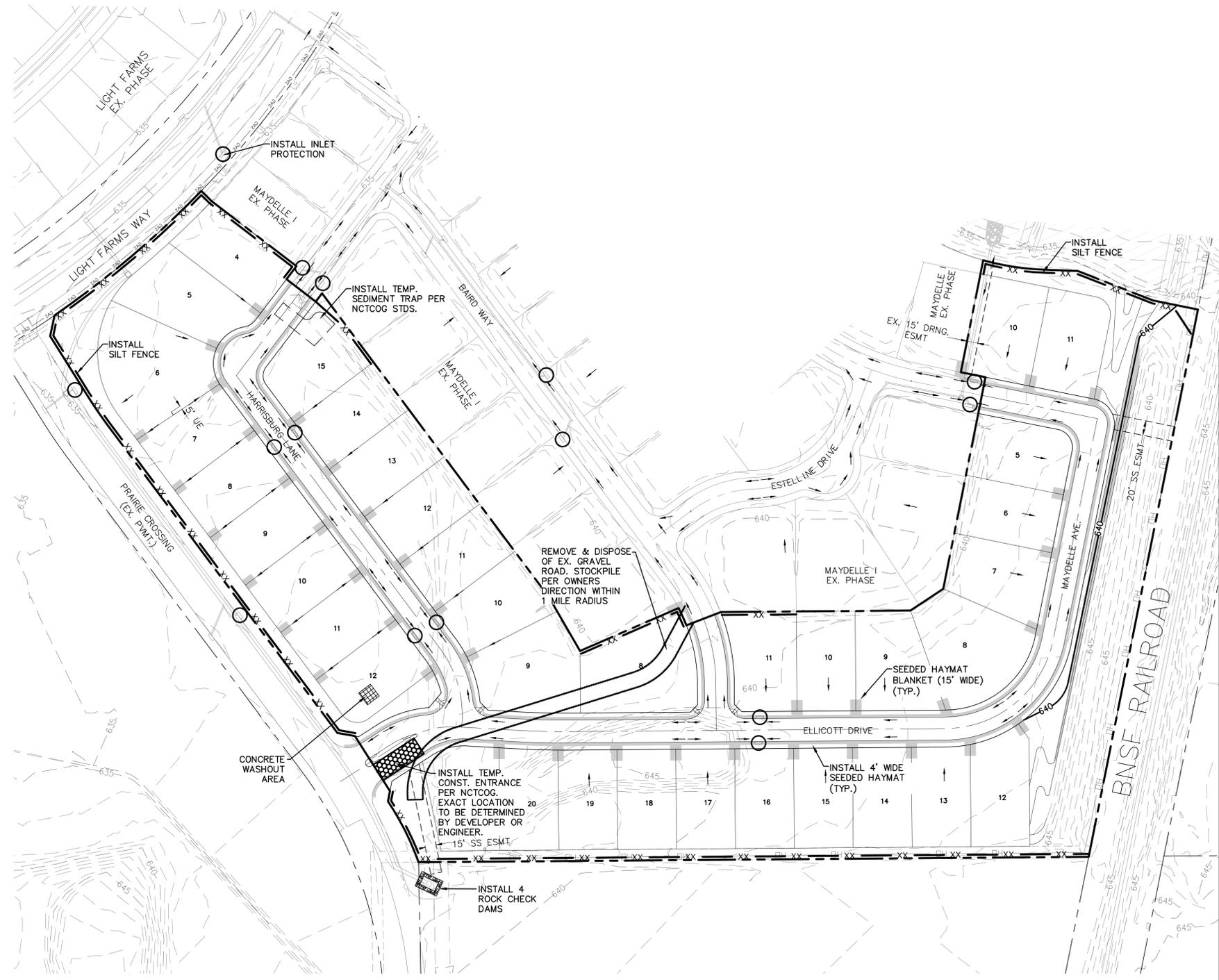
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LEGEND

XX	SILT FENCE
[Cross-hatched box]	CONCRETE WASHOUT AREA
---	CLEARING LIMITS
○	INLET PROTECTION
→	PROPOSED ONSITE FLOW
▭	LOT LINE HAYMAT
▭	EROSION CONTROL BLANKET
▭	ROCK CHECK DAM
[Grid pattern box]	TEMPORARY CONST. ENTRANCE



AREA OF DISTURBANCE = 15.5 AC.

PHASES OF EROSION CONTROL

- A. GRADING
 1. INSTALL SILT FENCE
 2. INSTALL CONSTRUCTION ENTRANCE
 3. INSTALL SEDIMENT BASIN
 4. INSTALL INLET PROTECTIONS ON EXISTING INLETS
- B. UTILITIES
 1. MAINTAIN SILT FENCE. INSTALL SILT FENCE AROUND ALL SANITARY SEWER MANHOLES
 2. MAINTAIN CONSTRUCTION ENTRANCE
 3. MAINTAIN SEDIMENT BASIN
 4. INSTALL INLET PROTECTIONS ON NEW INLETS
- C. WATER INJECTION OF PADS
 1. MAINTAIN SILT FENCE
 2. MAINTAIN CONSTRUCTION ENTRANCE
 3. MAINTAIN SEDIMENT BASIN
 4. MAINTAIN INLET PROTECTIONS
 5. INSTALL SILT FENCE AROUND SS MH
 6. WATER INJECT PADS CLEAR OF SEDIMENT BASIN
- D. WATER INJECTION OF REMAINING PADS
 1. MAINTAIN SILT FENCE
 2. REMOVE CONSTRUCTION ENTRANCE
 3. INSTALL CONCRETE WASHOUT AREA
 4. INSTALL EROSION CONTROL BLANKET ALONG BACK OF CURB
 5. INSTALL SILT FENCE CHEVRONS AT LOT SWALES
- E. PAVING
 1. MAINTAIN SILT FENCE
 2. REMOVE CONSTRUCTION ENTRANCE
 3. INSTALL CONCRETE WASHOUT AREA
 4. INSTALL EROSION CONTROL BLANKET ALONG BACK OF CURB
 5. INSTALL SILT FENCE CHEVRONS AT LOT SWALES

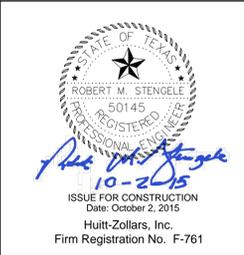
NOTE:
SUBDIVISION CONTRACTOR REQUIRED TO REPAIR AND/OR REPLACE EXISTING EROSION CONTROL DEVICES CAUSED BY HIS ACTIVITY.

BASIS OF VERTICAL DATUM - NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.61')

BENCHMARKS:

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DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

REVISIONS AND ISSUE DATES

LIGHT FARMS

EROSION CONTROL PLAN

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

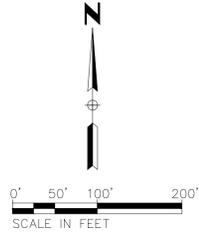
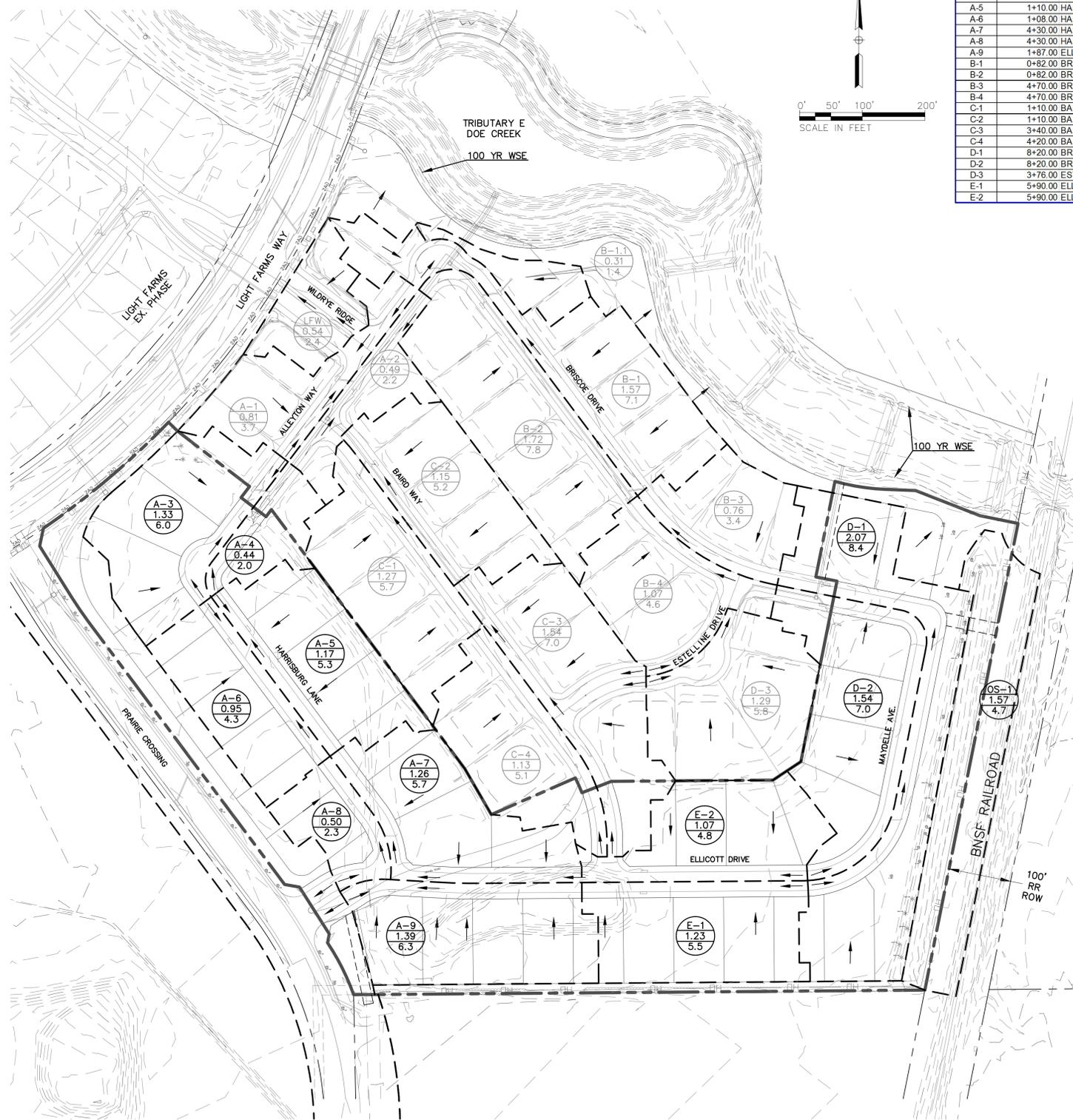
COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUILT-ZOLLARS Huilt-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757	SCALE 1" = 40'	SHEET No. 11
	DATE OCT 2, 2015	

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NO.	INLET LOCATION (PAVING STATION)	DESIGN STORM FREQUENCY (yr)	AREA RUNOFF Q=CIA				CARRY-OVER FROM UPSTREAM INLET (cfs)	TOTAL GUTTER FLOW (cfs)	GUTTER CAPACITY (cfs)	GUTTER SLOPE (ft/100 ft)	CROWN TYPE	SELECTED INLET		CARRY-OVER TO DOWNSTREAM INLET (cfs)	
			TIME OF CONC. (min)	INTENSITY (in/hr)	RUNOFF COEFF. "C"	AREA (ac)						"Q" (cfs)	LENGTH "L" (feet)		TYPE
1	2+55.00 ALLEYTON WAY	100	15	7.52	0.60	0.81	3.7	0.0	3.7	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-1	2+55.00 ALLEYTON WAY	100	15	7.52	0.60	0.49	2.2	0.0	2.2	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-2	4+75.00 ALLEYTON WAY	100	15	7.52	0.60	1.33	6.0	0.0	6.0	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-3	4+75.00 ALLEYTON WAY	100	15	7.52	0.60	0.44	2.0	0.0	2.0	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-4	4+75.00 ALLEYTON WAY	100	15	7.52	0.60	1.17	5.3	0.0	5.3	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-5	1+10.00 HARRISBURG LANE	100	15	7.52	0.60	1.26	5.7	0.0	5.7	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-6	1+08.00 HARRISBURG LANE	100	15	7.52	0.60	0.95	4.3	0.0	4.3	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-7	4+30.00 HARRISBURG LANE	100	15	7.52	0.60	1.26	5.7	0.0	5.7	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-8	4+30.00 HARRISBURG LANE	100	15	7.52	0.60	0.50	2.3	0.0	2.3	6.30	0.005	6" PARABOLIC	10	SAG	0.0
A-9	1+87.00 ELLICOTT DRIVE	100	15	7.52	0.60	1.39	6.3	0.0	6.3	6.30	0.005	6" PARABOLIC	10	SAG	0.0
B-1	0+82.00 BRISCOE DRIVE	100	15	7.52	0.60	1.57	7.1	0.0	7.1	6.30	0.005	6" PARABOLIC	10	SAG	0.0
B-2	0+82.00 BRISCOE DRIVE	100	15	7.52	0.60	1.72	7.8	0.1	7.9	6.30	0.005	6" PARABOLIC	10	SAG	0.0
B-3	4+70.00 BRISCOE DRIVE	100	15	7.52	0.60	0.76	3.4	0.0	3.4	6.30	0.005	6" PARABOLIC	10	ON GRADE	0.0
B-4	4+70.00 BRISCOE DRIVE	100	15	7.52	0.60	1.03	4.6	0.7	5.4	6.30	0.005	6" PARABOLIC	10	ON GRADE	0.1
C-1	1+10.00 BAIRD WAY	100	15	7.52	0.60	1.27	5.7	0.4	6.1	6.30	0.005	6" PARABOLIC	10	SAG	0.0
C-2	1+10.00 BAIRD WAY	100	15	7.52	0.60	1.15	5.2	0.1	5.3	6.30	0.005	6" PARABOLIC	10	SAG	0.0
C-3	3+40.00 BAIRD WAY	100	15	7.52	0.60	1.54	6.9	0.0	6.9	6.30	0.005	6" PARABOLIC	10	ON GRADE	0.4
C-4	4+20.00 BAIRD WAY	100	15	7.52	0.60	1.13	5.1	0.0	5.1	6.30	0.005	6" PARABOLIC	10	ON GRADE	0.1
D-1	8+20.00 BRISCOE DRIVE	100	15	7.52	0.54	2.07	8.4	0.0	8.4	6.30	0.005	6" PARABOLIC	10	SAG	0.0
D-2	8+20.00 BRISCOE DRIVE	100	15	7.52	0.60	1.54	6.9	0.0	6.9	6.30	0.005	6" PARABOLIC	10	SAG	0.0
D-3	3+76.00 ESTELLINE DRIVE	100	15	7.52	0.60	1.29	5.8	0.0	5.8	9.34	0.011	6" PARABOLIC	10	ON GRADE	0.7
E-1	5+90.00 ELLICOTT DRIVE	100	15	7.52	0.60	1.23	5.5	0.0	5.5	6.30	0.005	6" PARABOLIC	10	SAG	0.0
E-2	5+90.00 ELLICOTT DRIVE	100	15	7.52	0.60	1.07	4.8	0.0	4.8	6.30	0.005	6" PARABOLIC	10	SAG	0.0

DESIGN FLOW (Q _R) BY RATIONAL METHOD							
LOCATION, AREA DESIGNATION	TIME OF CONCENTRATION, T _c (MIN.)	INTENSITY "I ₁₀₀ " (in/hr)	DRAINAGE AREA "A" (AC)	RUNOFF COEFFICIENT "C"	FREQUENCY (YRS.)	DESIGN FLOW "Q ₁₀₀ " = C*I*A (CFS)	NOTE #
1	2	3	4	5		6	
A-1	15	7.52	0.81	0.60	100	3.7	2
A-2	15	7.52	0.49	0.60	100	2.2	2
A-3	15	7.52	1.33	0.60	100	6.0	1
A-4	15	7.52	0.44	0.60	100	2.0	1
A-5	15	7.52	1.17	0.60	100	5.3	1
A-6	15	7.52	0.95	0.60	100	4.3	1
A-7	15	7.52	1.26	0.60	100	5.7	1
A-8	15	7.52	0.50	0.60	100	2.3	1
A-9	15	7.52	1.39	0.60	100	6.3	1
B-1	15	7.52	1.57	0.60	100	7.1	2
B-1.1	15	7.52	0.31	0.60	100	1.4	2
B-2	15	7.52	1.72	0.60	100	7.8	2
B-3	15	7.52	0.76	0.60	100	3.4	2
B-4	15	7.52	1.03	0.60	100	4.6	2
C-1	15	7.52	1.27	0.60	100	5.7	2
C-2	15	7.52	1.15	0.60	100	5.2	2
C-3	15	7.52	1.54	0.60	100	7.0	2
C-4	15	7.52	1.13	0.60	100	5.1	2
D-1	15	7.52	2.07	0.54	100	8.4	2
D-2	15	7.52	1.54	0.60	100	7.0	2
D-3	15	7.52	1.29	0.60	100	5.8	2
E-1	15	7.52	1.23	0.60	100	5.5	1
E-2	15	7.52	1.07	0.60	100	4.8	1
OS-1	15	7.52	1.57	0.40	100	4.7	3
LFW	15	7.52	0.54	0.60	100	2.4	3

NOTES:
 1. DRAINAGE AREA CALCULATIONS FOR PHASE II OF MAYDELLE
 2. DRAINAGE AREA CALCULATIONS FOR FUTURE PHASES OF MAYDELLE
 3. DRAINAGE AREA CALCULATIONS FOR OFF-SITE RUNOFF
 HIGHLIGHTED CELLS WERE PREVIOUSLY APPROVED WITH THE FIRST PHASE OF MAYDELLE

NOTE:
 DETENTION FOR THIS PARCEL IS ACCOUNTED FOR IN THE DESIGN OF THE LAKES AND PONDS FOR THE LIGHT FARMS PHASE ONE PLAT (RECORDED 6/14/13-2013/279) AND MODELED IN THE LIGHT FARMS DRAINAGE REPORT LOMR APPROVED BY FEMA. ISSUE DATE: JUNE 12, 2013. CASE NO.: 13-06-1085P

LEGEND

AREA NO. — XX-X
 ACREAGE — AC
 Cqfs — CFS

AREA NO. — XX-X
 ACREAGE — AC
 Cqfs — CFS

— — — — — PROP. DRAINAGE AREA LINE
 — — — — — SURFACE FLOW

BASIS OF VERTICAL DATUM - NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.81')

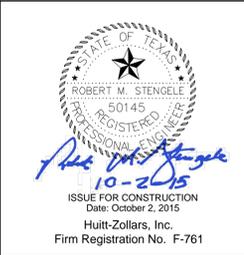
BENCHMARKS:
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 BM # 80 - Brass monument set on curb inlet, southeast side of Light Farms Way, 79+- feet northeasterly from the centerline of Wildrye Ridge. Elev. = 633.47'

STATE OF TEXAS
 ROBERT M. STENGLE
 50145
 REGISTERED PROFESSIONAL ENGINEER
 10-2015
 ISSUE FOR CONSTRUCTION
 Date: October 2, 2015
 Huitt-Zollars, Inc.
 Firm Registration No. F-761

10/2/15	ISSUE FOR CONSTRUCTION	
DATE	DESCRIPTION	REV. No.
REVISIONS AND ISSUE DATES		
LIGHT FARMS		
DRAINAGE AREA MAP		
MAYDELLE NEIGHBORHOOD - PH 2		
COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1		
COLLIN COUNTY, TEXAS		
LFC LAND COMPANY, LLC		
8401 North Central Expressway, Suite 350, Dallas, Texas 75225 Phone (214) 292-3410 Fax (214) 292-3411		
HUITT-ZOLLARS Huitt-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757		SCALE 1" = 40' DATE OCT 2, 2015 SHEET No. 12

CAD FILE PATH: I:\proj\01390553-80\105\dwg\phase II\sheet\01390553-C012-dam.dwg

Line or Lateral Name	RUNOFF COLLECTION POINT (Inlet or Manhole)		Distance Between Collection Points (ft)	INCREMENTAL DRAINAGE AREA				Accumulated "CA"	Time at Upstream Station (minutes)	Design Storm Frequency (yrs)	Intensity "I" (inches/hr)	Storm Water Runoff "Q" (c.f.s.)	Slope of Hydraulic Gradient "S" (ft/ft)	Selected Storm Sewer Size	Slope of Storm Pipe (ft/ft)	Pipe Capacity (c.f.s.)	Velocity in Sewer Between Collection Points "V" (f.p.s.)	Friction Head Loss Coeff. K _f per City of Celina Storm Manual	K _f city of Celina Storm Manual	Velocity Head Loss of Upstream Station (feet)	Flow Time in Sewer Distance/V*60 (minutes)	Time of Downstream Station (minutes)	Remarks
	Upstream Station	Downstream Station		Area No.	Drainage Area "A" (Acres)	Runoff Coeff. "C"	Incremental "CA"																
	1	2	3	4	5	6	7	8	9	10	11	12.0	13	14	15	16	17	18	19	20			
LINE A																							
A-9	14+99.00	14+64.00	35	A-9	1.39	0.6	0.83	0.83	15.00	100	7.52	6.3	0.0016	21	0.0233	24.2	8.41	0.05	1.25	1.10	0.07	15.07	PARTIAL FLOW
	14+64.00	14+61.00	3		0.00	0.6	0.00	0.83	15.07	100	7.52	6.3	0.0004	27	0.0030	17.0	3.97	0.00	1.00	0.24	0.00	15.07	PARTIAL FLOW
LINE E	14+61.00	13+40.00	121	LAT E-1 & LAT E-2	2.30	0.6	1.38	2.21	15.07	100	7.52	16.6	0.0029	27	0.0030	17.0	4.86	0.35	0.60	0.37	0.41	15.48	PARTIAL FLOW
LAT A-7 & LAT A-8	13+40.00	10+19.00	321	MANHOLE	1.76	0.6	1.06	3.27	15.48	100	7.52	24.6	0.0022	33	0.0030	29.0	5.48	0.69	0.50	0.47	0.98	16.46	PARTIAL FLOW
	10+19.00	10+16.00	3	PIPE SIZE CHANGE	0.00	0.6	0.00	3.27	16.46	100	7.52	24.6	0.0014	36	0.0030	36.5	5.55	0.00	0.30	0.48	0.00	16.46	PARTIAL FLOW
LAT A-6	10+16.00	10+11.00	5	A-6	0.95	0.6	0.57	3.84	16.46	100	7.52	28.9	0.0019	36	0.0030	36.5	5.74	0.01	0.40	0.51	0.01	16.48	PARTIAL FLOW
LAT A-5	10+11.00	9+24.00	87	A-5	1.17	0.6	0.70	4.54	16.46	100	7.52	34.2	0.0026	36	0.0030	36.5	5.87	0.23	0.40	0.54	0.25	16.71	PARTIAL FLOW
	9+24.00	7+44.00	180	MANHOLE	0.00	0.6	0.00	4.54	16.71	100	7.52	34.2	0.0026	36	0.0030	36.5	5.87	0.47	1.00	0.54	0.51	17.22	PARTIAL FLOW
	7+44.00	7+41.00	3	PIPE SIZE CHANGE	0.00	0.6	0.00	4.54	17.22	100	7.52	34.2	0.0012	42	0.0030	55.1	6.03	0.00	0.70	0.58	0.01	17.22	PARTIAL FLOW
LAT A-4 (EXISTING)	7+41.00	7+31.00	10	A-4	0.44	0.6	0.27	4.81	17.23	100	7.52	36.2	0.0013	42	0.0030	55.1	6.10	0.01	0.40	0.58	0.03	17.25	PARTIAL FLOW
LAT A-3 (EXISTING)	7+31.00	5+84.00	147	A-3	1.33	0.6	0.80	5.61	17.25	100	7.52	42.2	0.0018	42	0.0030	55.1	6.31	0.26	0.40	0.82	0.39	17.64	PARTIAL FLOW
LAT A-2 (EXISTING)	5+84.00	5+21.00	63	MANHOLE	5.09	0.6	3.05	8.66	17.64	100	7.52	65.1	0.0021	48	0.0025	71.8	6.47	0.13	0.00	0.65	0.16	17.80	PARTIAL FLOW
LAT A-2 (EXISTING)	5+21.00	5+11.00	10	A-2	0.49	0.6	0.30	8.96	17.80	100	7.52	67.3	0.0022	48	0.0025	71.8	6.50	0.02	0.40	0.66	0.03	17.83	PARTIAL FLOW
LAT A-1 (EXISTING)	5+11.00	1+35.00	376	A-1	0.81	0.6	0.49	9.44	17.83	100	7.52	71.0	0.0024	48	0.0025	71.8	6.51	0.92	0.40	0.66	0.96	18.79	BEGN PARTIAL FLOW AT STA 2+08
LAT A-8	0+28.00	0+00.00	28	A-8	0.50	0.6	0.30	0.30	15.00	100	7.52	2.3	0.0002	21	0.0468	34.3	7.97	0.01	1.25	0.99	0.06	15.06	PARTIAL FLOW
LAT A-7	0+32.00	0+00.00	32	A-7	1.26	0.6	0.76	0.76	15.00	100	7.52	5.7	0.0013	21	0.0138	18.6	6.84	0.04	1.25	0.73	0.08	15.08	PARTIAL FLOW
LAT A-6	0+08.00	0+00.00	8	A-6	0.95	0.6	0.57	0.57	15.00	100	7.52	4.3	0.0007	21	0.1396	59.2	14.22	0.01	1.25	3.14	0.01	15.01	PARTIAL FLOW
LAT A-5	0+28.00	0+00.00	28	A-5	1.17	0.6	0.70	0.70	15.00	100	7.52	5.3	0.0011	21	0.0416	32.3	9.98	0.03	1.25	1.55	0.05	15.05	PARTIAL FLOW
LAT A-4 (EXISTING)	0+08.00	0+00.00	8	A-4	0.442	0.6	0.27	0.27	15.00	100	7.52	2.0	0.0004	18	0.1313	38.1	11.39	0.00	1.25	2.01	0.01	15.01	PARTIAL FLOW
LAT A-3 (EXISTING)	0+28.00	0+00.00	28	A-3	1.33	0.6	0.80	0.80	15.00	100	7.52	6.0	0.0033	18	0.0390	20.7	3.40	0.09	1.25	0.18	0.14	15.14	PARTIAL FLOW
LAT A-2 (EXISTING)	0+08.00	0+00.00	8	A-2	0.49	0.6	0.29	0.29	15.00	100	7.52	2.2	0.0004	18	0.1938	46.2	13.44	0.00	1.25	2.80	0.01	15.01	PARTIAL FLOW
LAT A-1 (EXISTING)	0+28.00	0+00.00	28	A-1	0.81	0.6	0.49	0.49	15.00	100	7.52	3.7	0.0012	18	0.0550	24.6	10.03	0.03	1.25	1.56	0.05	15.05	PARTIAL FLOW
LINE E																							
LAT E-2	4+12.00	4+09.00	3		0	0.6	0.00	0.00	15.00	100	7.52	0.0	0.0000	21	0.0048	11.0	0.00	0.00	0.00	0.00	0.00	15.00	PARTIAL FLOW
LAT E-2	4+09.00	3+97.00	12	E-2	1.07	0.6	0.64	0.64	15.00	100	7.52	4.8	0.0009	21	0.0048	11.0	4.40	0.01	0.60	0.30	0.05	15.05	PARTIAL FLOW
LAT E-1	3+97.00	0+62.00	335	E-1	1.23	0.6	0.74	1.38	15.05	100	7.52	10.3	0.0042	21	0.0048	11.0	5.19	1.42	0.60	0.42	1.08	16.12	PARTIAL FLOW
	0+62.00	0+00.00	62		0	0.6	0.00	1.38	16.12	100	7.52	10.3	0.0042	21	0.0048	11.0	5.19	0.26	0.00	0.42	0.00	16.12	PARTIAL FLOW
LAT E-2	0+16.00	0+00.00	16	E-2	1.07	0.6	0.64	0.64	15.00	100	7.52	4.8	0.0009	21	0.0130	18.1	6.24	0.01	1.25	0.60	0.04	15.04	PARTIAL FLOW
LAT E-1	0+08.00	0+00.00	8	E-1	1.23	0.6	0.74	0.74	15.00	100	7.52	5.5	0.0012	21	0.0062	12.5	4.96	0.01	1.25	0.38	0.03	15.03	PARTIAL FLOW



10/2/15	ISSUE FOR CONSTRUCTION	
DATE	DESCRIPTION	REV. No.
REVISIONS AND ISSUE DATES		

LIGHT FARMS

DRAINAGE AREA CALCS

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

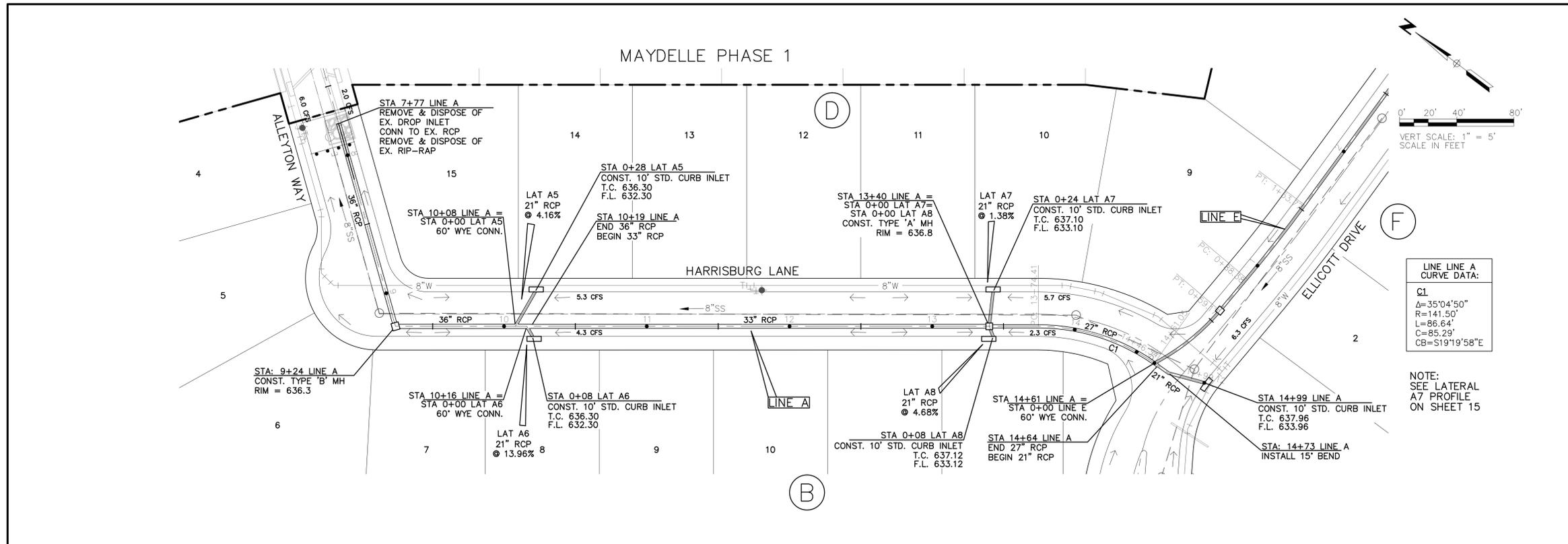
LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS Huitt-Zollars, Inc. 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757	SCALE	SHEET No.
	DATE	13

DWG: I:\proj\01390501\01390532 - 80' Ios\DWG\PHASE I\SHSHEETS\01390563-C013-CALCS.dwg USER: jgan
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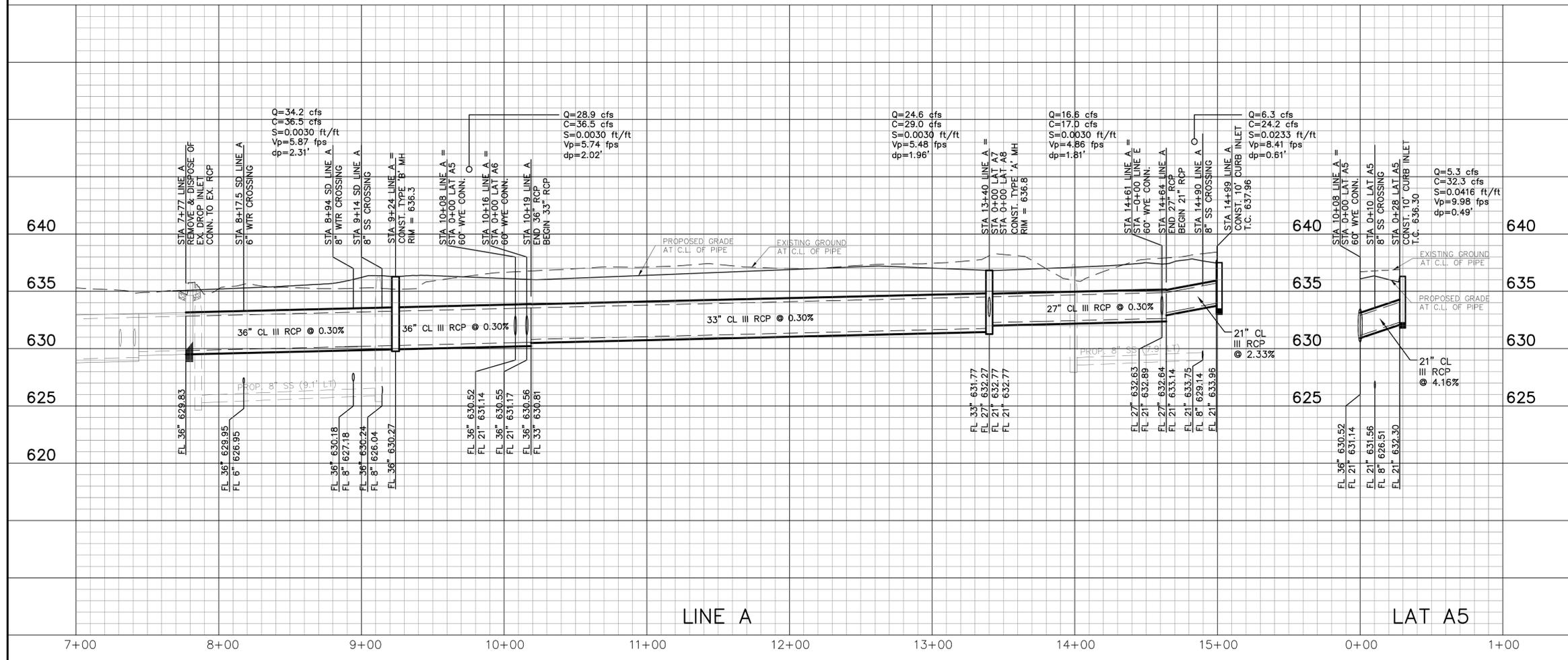
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LINE A CURVE DATA:
 C1
 Δ=35°04'50"
 R=141.50'
 L=86.64'
 C=85.29'
 CB=S19°19'58"E

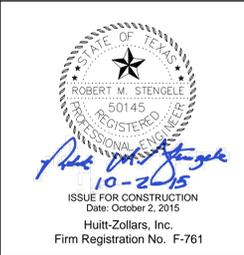
- LEGEND**
- PROPOSED STORM LINE
 - - - EXISTING STORM LINE
 - PROPOSED STORM INLET
 - EXISTING STORM INLET
 - PROPOSED STORM MANHOLE
 - EXISTING STORM MANHOLE
 - PROPOSED FLOW DIRECTION

NOTE:
 SEE LATERAL
 A7 PROFILE
 ON SHEET 15



BASIS OF VERTICAL DATUM -
 NAVD 1988 based on National
 Geodetic Survey Benchmarks
 N-185 (Elevation 650.78') and
 H263 (Elevation - 643.81')

BENCHMARKS:
 BM # 79 - Brass monument set on
 top of curb, southeast side of Light
 Farms Way, 520+- feet
 southwestly from the centerline
 of Wildrye Ridge.
 Elev. = 634.45'
 BM # 80 - Brass monument set on
 curb inlet, southeast side of Light
 Farms Way, 79+- feet
 northeasterly from the centerline
 of Wildrye Ridge.
 Elev. = 633.47'



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

REVISIONS AND ISSUE DATES

LIGHT FARMS

STORM PLAN & PROFILE
 LINE A

MAYDELLE NEIGHBORHOOD - PH 2
 COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
 8401 North Central Expressway, Suite 350, Dallas, Texas 75225
 Phone (214) 292-3410 Fax (214) 292-3411

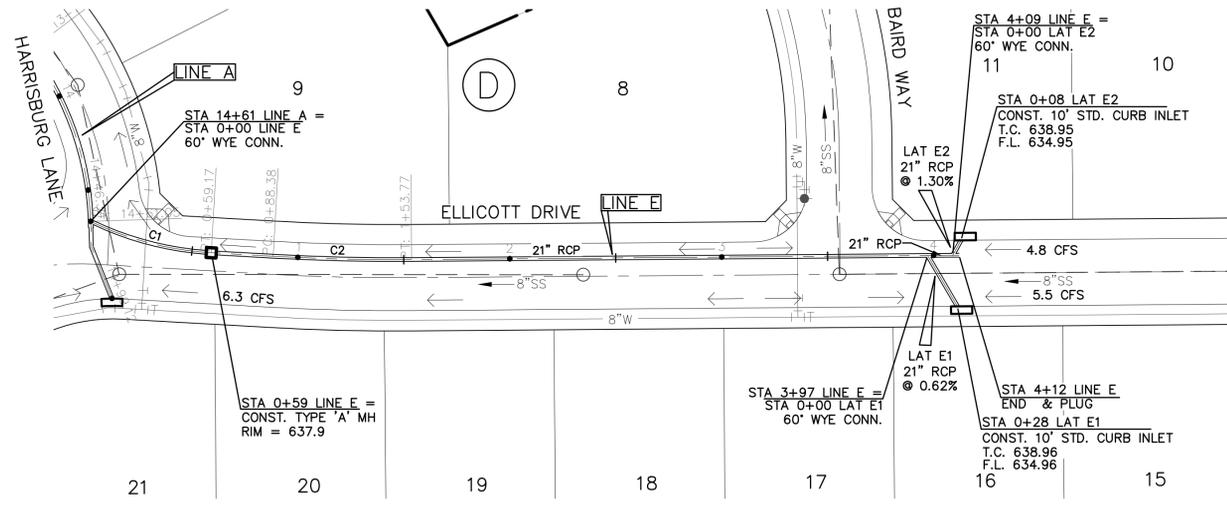
HUITT-ZOLLARS
 Huitt-Zollars, Inc. Dallas
 1717 McKinney Avenue, Suite 1400
 Dallas, Texas 75202-1236
 Phone (214) 871-3311 Fax (214) 871-0757

SCALE
 H: 1" = 40'
 V: 1" = 5'

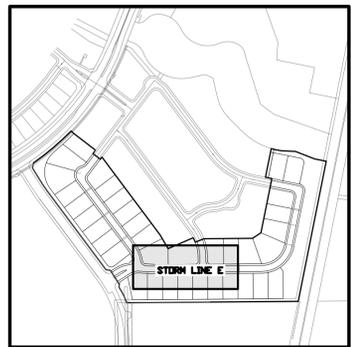
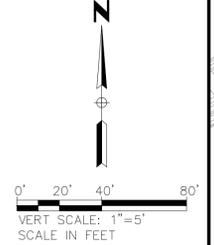
DATE
 OCT 2, 2015

SHEET No.
 14

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(E)



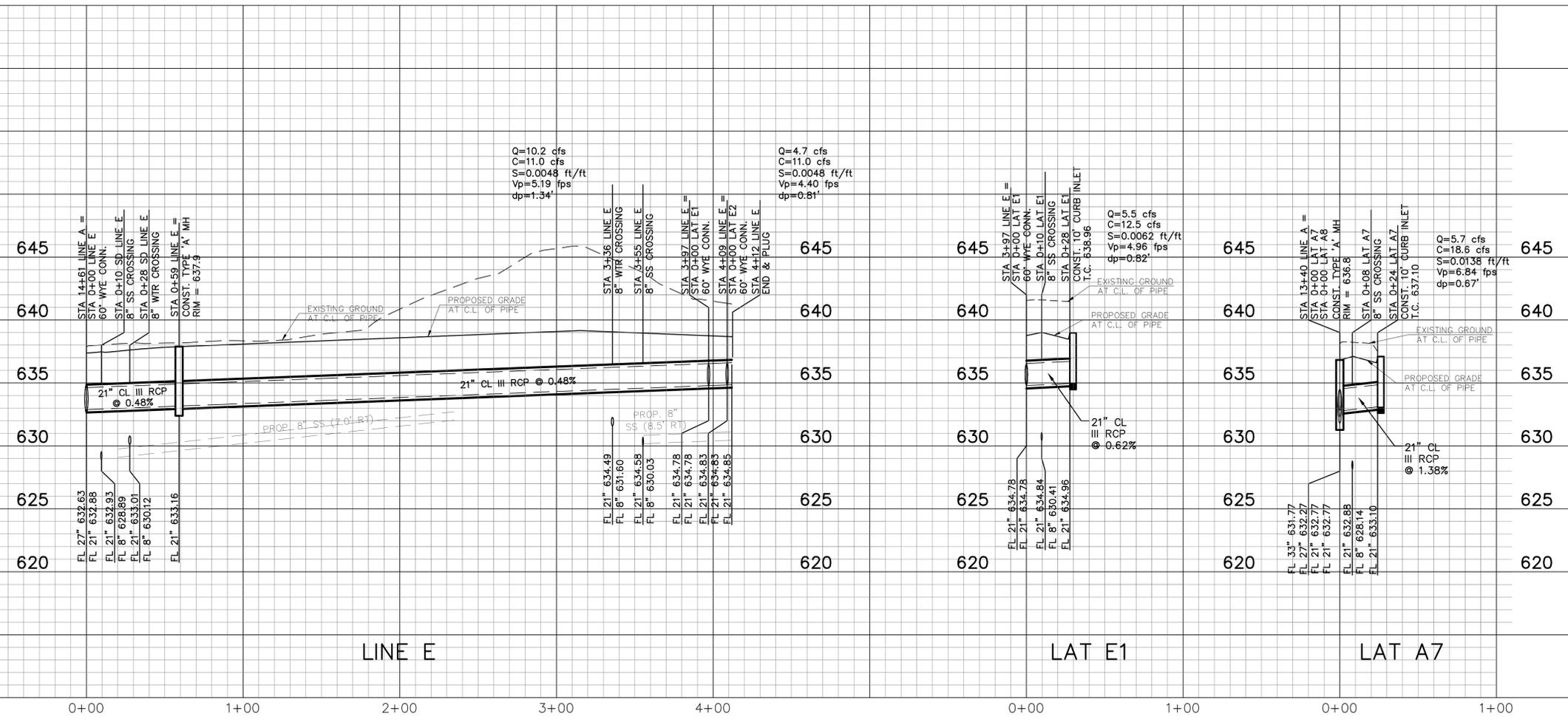
KEY MAP NTS

LEGEND

	PROPOSED STORM LINE
	EXISTING STORM LINE
	PROPOSED STORM INLET
	EXISTING STORM INLET
	PROPOSED STORM MANHOLE
	EXISTING STORM MANHOLE
	PROPOSED FLOW DIRECTION

CENTER LINE LINE B' CURVE DATA:

C1	C2
$\Delta=22^{\circ}36'00''$	$\Delta=03^{\circ}41'10''$
$R=150.00'$	$R=1016.50'$
$L=59.17'$	$L=65.40'$
$C=58.78'$	$C=65.38'$
$CB=S75^{\circ}28'08''E$	$CB=S88^{\circ}36'4.3''E$



BASIS OF VERTICAL DATUM -
 NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.61')

BENCHMARKS:
 BM # 79 - Brass monument set on top of curb, southeast side of Light Farms Way, 520+- feet southwestly from the centerline of Wildrye Ridge. Elev. = 634.45'
 BM # 80 - Brass monument set on curb inlet, southeast side of Light Farms Way, 79+- feet northeasterly from the centerline of Wildrye Ridge. Elev. = 633.47'



10/2/15	ISSUE FOR CONSTRUCTION	
DATE	DESCRIPTION	REV. No.

REVISIONS AND ISSUE DATES

LIGHT FARMS

STORM PLAN & PROFILE
LINE E

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO. 1

COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
 8401 North Central Expressway, Suite 350, Dallas, Texas 75225
 Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS
 Huitt-Zollars, Inc. Dallas
 1717 McKinney Avenue, Suite 1400
 Dallas, Texas 75202-1236
 Phone (214) 871-3311 Fax (214) 871-0757

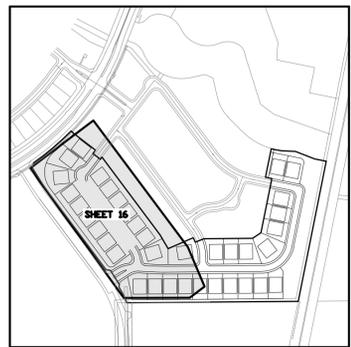
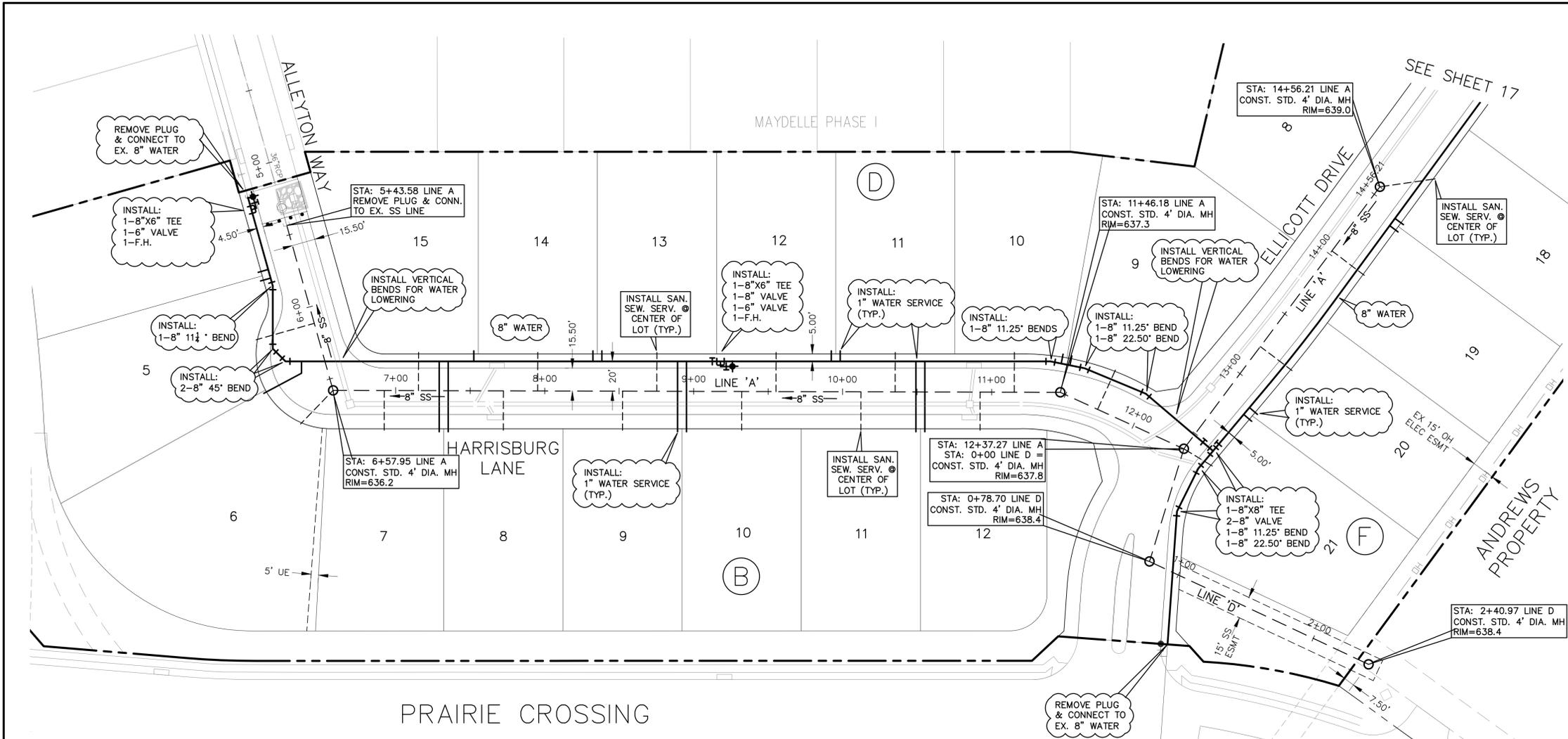
SCALE
H: 1" = 40'
V: 1" = 5'

DATE
OCT 2, 2015

SHEET No.
15

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LEGEND

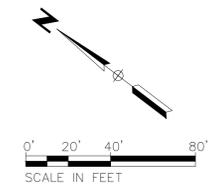
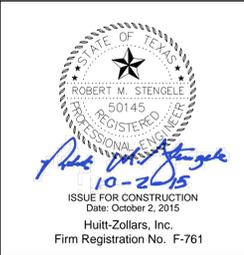
	PROPOSED WATER MAIN (PVC)
	EXISTING WATER MAIN (PVC)
	8" PROPOSED SANITARY SEWER (PVC)
	EXISTING SANITARY SEWER (PVC)
	PROPOSED FIRE HYDRANT
	EXISTING FIRE HYDRANT
	PROPOSED SANITARY SEWER M.H.
	EXISTING SANITARY SEWER M.H.
	PROPOSED WATER VALVE
	EXISTING WATER VALVE
	PROPOSED WATER SERVICE
	PROPOSED 4" SANITARY SEWER SERVICE
	PROPOSED SANITARY SEWER CLEANOUT
	BOUNDARY LINE/PHASE LINE

BASIS OF VERTICAL DATUM - NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.61')

BENCHMARKS:

BM # 79 - Brass monument set on top of curb, southeast side of Light Farms Way, 520+- feet southwestly from the centerline of Wildrye Ridge.
Elev. = 634.45'

BM # 80 - Brass monument set on curb inlet, southeast side of Light Farms Way, 79+- feet northeasterly from the centerline of Wildrye Ridge.
Elev. = 633.47'



NOTE:
 WATER AND SANITARY SEWER LINE MUST HAVE A MINIMUM SEPARATION DISTANCE OF 9' PER TCEQ REQUIREMENTS.

10/2/15	ISSUE FOR CONSTRUCTION	
DATE	DESCRIPTION	REV. No.
REVISIONS AND ISSUE DATES		

LIGHT FARMS

WATER AND SANITARY SEWER PLAN

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

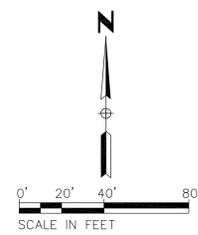
COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
 8401 North Central Expressway, Suite 350, Dallas, Texas 75225
 Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLIARS Huitt-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757	SCALE H: 1" = 40'	SHEET No. 16
	DATE OCT 2, 2015	

CAD FILE PATH: I:\proj\01390501\01390532 - 80' lots\New\Phase I\01390553-C016-WSP\AN.dwg

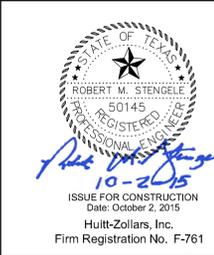
NOTE:
WATER AND SANITARY SEWER LINE MUST
HAVE A MINIMUM SEPARATION DISTANCE
OF 9' PER TCEQ REQUIREMENTS.



LEGEND	
	PROPOSED WATER MAIN (PVC)
	EXISTING WATER MAIN (PVC)
	8" PROPOSED SANITARY SEWER (PVC)
	EXISTING SANITARY SEWER (PVC)
	PROPOSED FIRE HYDRANT
	EXISTING FIRE HYDRANT
	PROPOSED SANITARY SEWER M.H.
	EXISTING SANITARY SEWER M.H.
	PROPOSED WATER VALVE
	EXISTING WATER VALVE
	PROPOSED WATER SERVICE
	PROPOSED 4" SANITARY SEWER SERVICE
	PROPOSED SANITARY SEWER CLEANOUT
	BOUNDARY LINE/PHASE LINE

BASIS OF VERTICAL DATUM -
NAVD 1988 based on National
Geodetic Survey Benchmarks
N-185 (Elevation 650.78') and
H263 (Elevation - 643.81')

BENCHMARKS:
BM # 79 - Brass monument set on top of curb, southeast side of Light Farms Way, 520+ feet southwesterly from the centerline of Wildrye Ridge.
Elev. = 634.45'
BM # 80 - Brass monument set on curb inlet, southeast side of Light Farms Way, 79+ feet northeasterly from the centerline of Wildrye Ridge.
Elev. = 633.47'



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

REVISIONS AND ISSUE DATES

LIGHT FARMS

WATER AND SANITARY SEWER PLAN

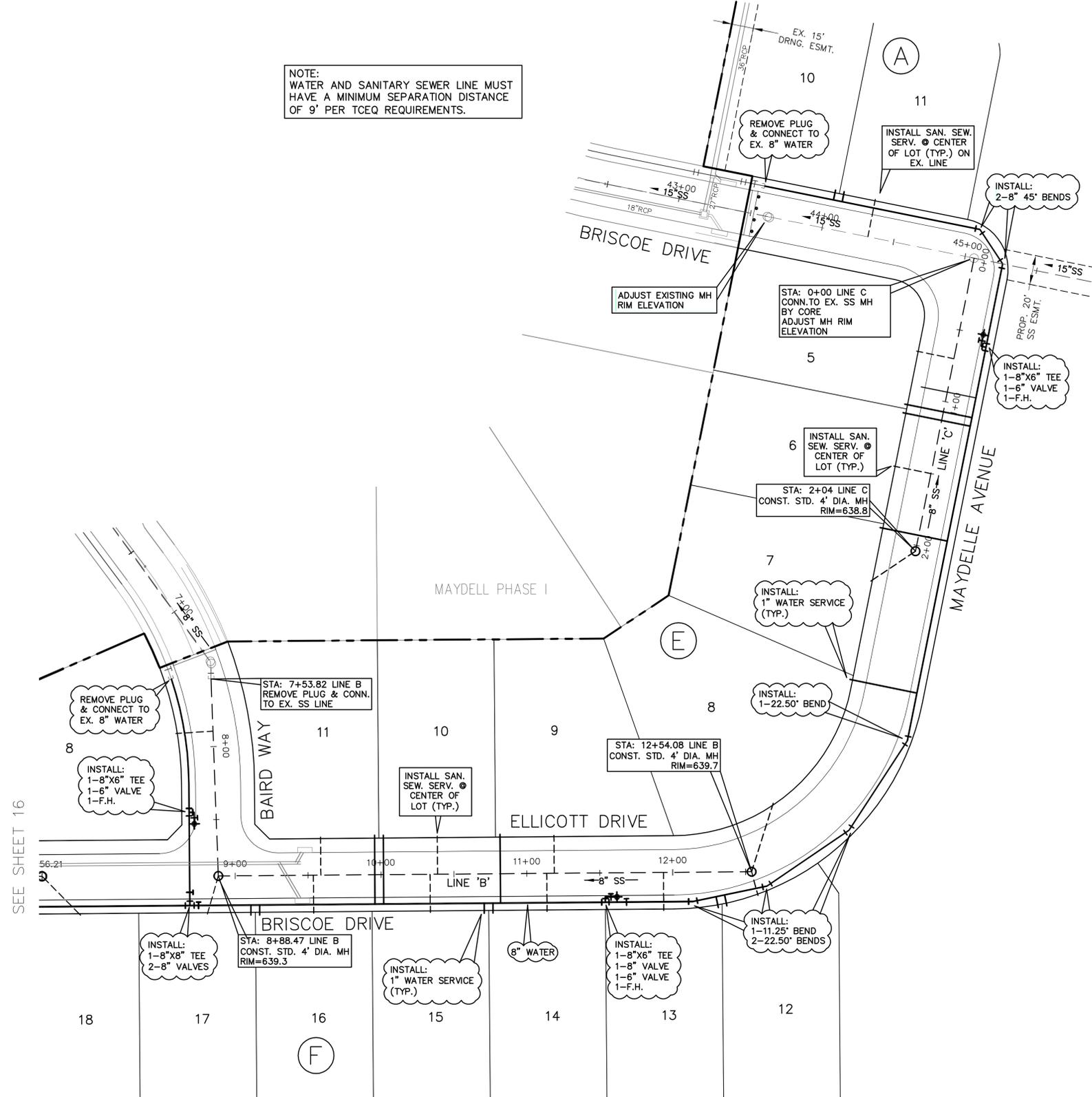
MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS Hull-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757	SCALE 1" = 40'	SHEET No. 17
	DATE OCT 2, 2015	

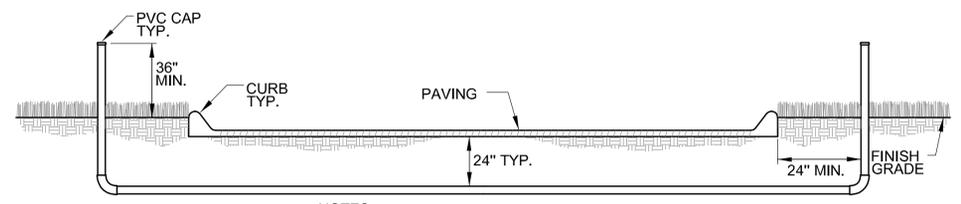


SEE SHEET 16

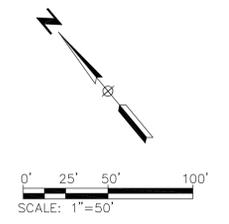
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CAD FILE PATH: I:\Proj\01390532 - 80' Lots\Map\Phase 1\Utilities\01390532-C017-wsplan.dwg

Blade #1 36x6" 2-Sided Sign Blade				Blade #2 36x6" 2-Sided Sign Blade				
Sign Key	Block No. (South)	Name	Suffix	Block No. (North)	Block No. (West)	Name	Suffix	Block No. (East)
1	XXXX	HARRISBURG	LANE	XXXX	XXXX	ALLEYTON	WAY	XXXX
2	XXXX	PRAIRIE CROSSING	DRIVE	XXXX	XXXX	ELLCOTT	DRIVE	XXXX
3	XXXX	HARRISBURG	LANE	XXXX	XXXX	ELLCOTT	DRIVE	XXXX
4	XXXX	BAIRD	WAY	XXXX	XXXX	ELLCOTT	DRIVE	XXXX
5	XXXX	MAYDELLE	AVE	XXXX	XXXX	BRISCOE	DRIVE	XXXX
6	XXXX	MAYDELLE	AVE	XXXX	XXXX	ELLCOTT	DRIVE	XXXX



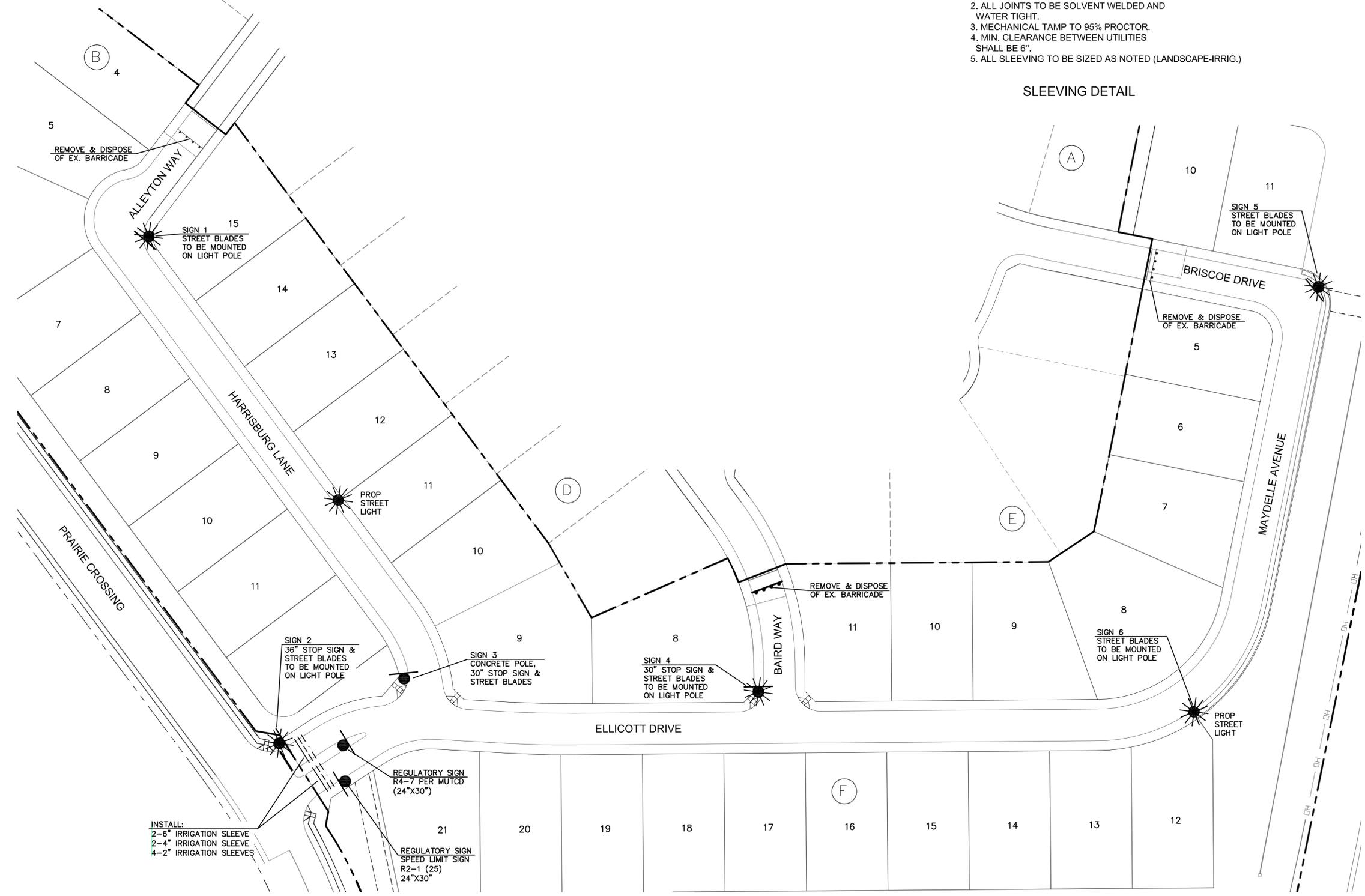
- NOTES:
1. ALL PVC PIPE TO BE CLASS 200.
 2. ALL JOINTS TO BE SOLVENT WELDED AND WATER TIGHT.
 3. MECHANICAL TAMP TO 95% PROCTOR.
 4. MIN. CLEARANCE BETWEEN UTILITIES SHALL BE 6".
 5. ALL SLEEVING TO BE SIZED AS NOTED (LANDSCAPE-IRRIG.)



SLEEVING DETAIL

LEGEND

- 8" IRRIGATION SLEEVE
- - - 4" IRRIGATION SLEEVE
- 12" WIDE STOP BAR
- ☀ STREET LIGHT
- STREET SIGN
- TRAFFIC FLOW DIRECTION (FOR REFERENCE ONLY)

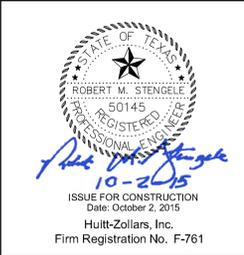


BASIS OF VERTICAL DATUM - NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.81')

BENCHMARKS:

BM # 79 - Brass monument set on top of curb, southeast side of Light Farms Way, 520+- feet southwesterly from the centerline of Wildrye Ridge.
Elev. = 634.45'

BM # 80 - Brass monument set on curb inlet, southeast side of Light Farms Way, 79+- feet northeasterly from the centerline of Wildrye Ridge.
Elev. = 633.47'



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

LIGHT FARMS

STRIPING, SIGNAGE & SLEEVING PLAN

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

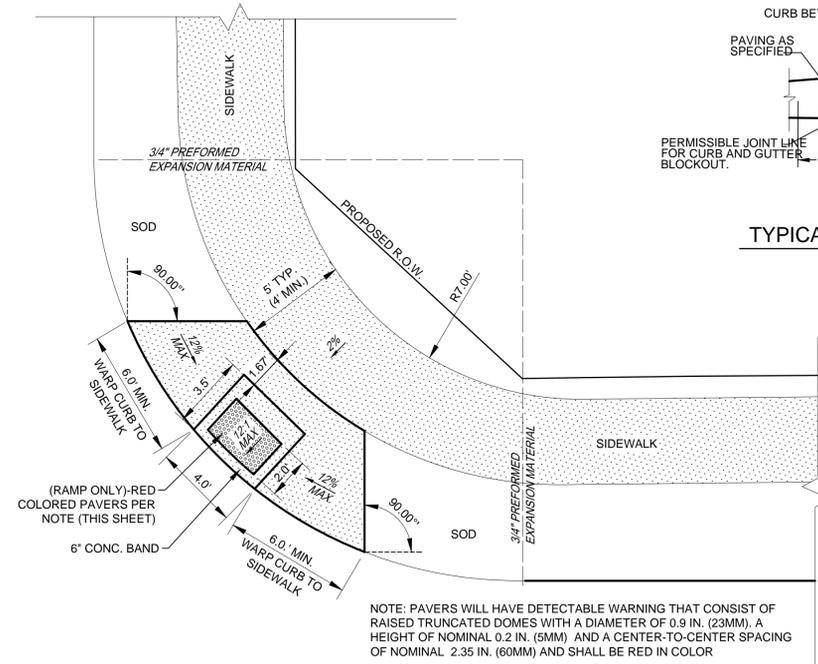
COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS Hult-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757	SCALE	SHEET No.
	DATE	20

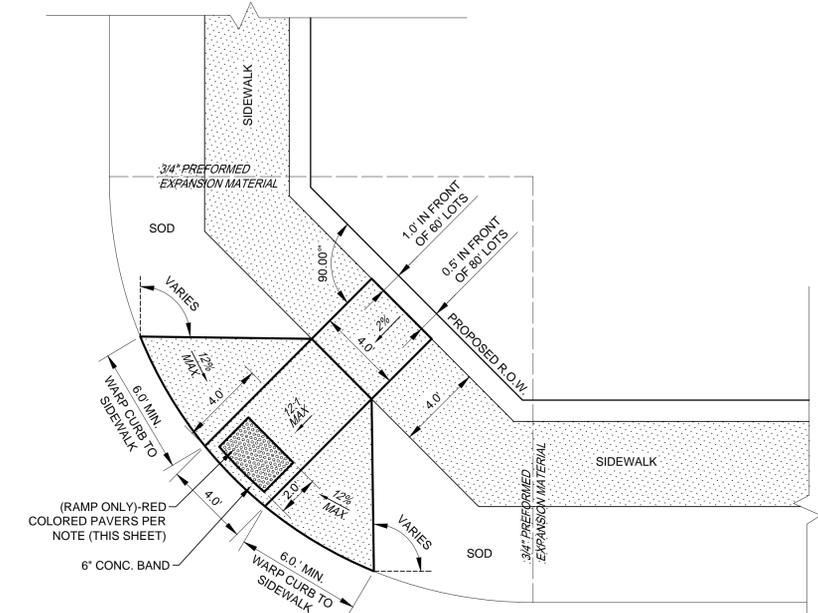
DWG: I:\proj\139050\101390532 - 80' Lots\DWG\PHASE II\SHSHEETS\101390553-C02A-SSS.dwg USER: alceffell
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DWG: I:\proj\1390501\1390532-80\cas\DWG\PHASE I\SHSHEETS\01390553-C021-PAY DETS.DWG USER: lgran
 DATE: Oct 01, 2015 10:57am XREFS: 01390553-BD



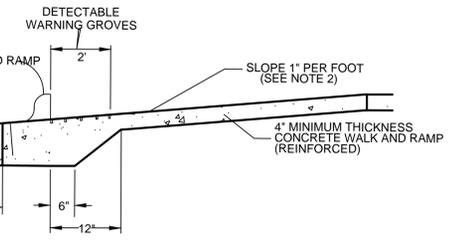
TYPICAL RAMP AT CURVED SIDEWALK
N.T.S.

NOTE: PAVERS WILL HAVE DETECTABLE WARNING THAT CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9 IN. (23MM), A HEIGHT OF NOMINAL 0.2 IN. (5MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN. (60MM) AND SHALL BE RED IN COLOR

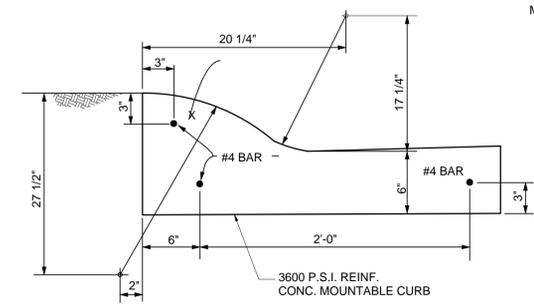


TYPICAL "SHORT LANDING" RAMP
N.T.S.

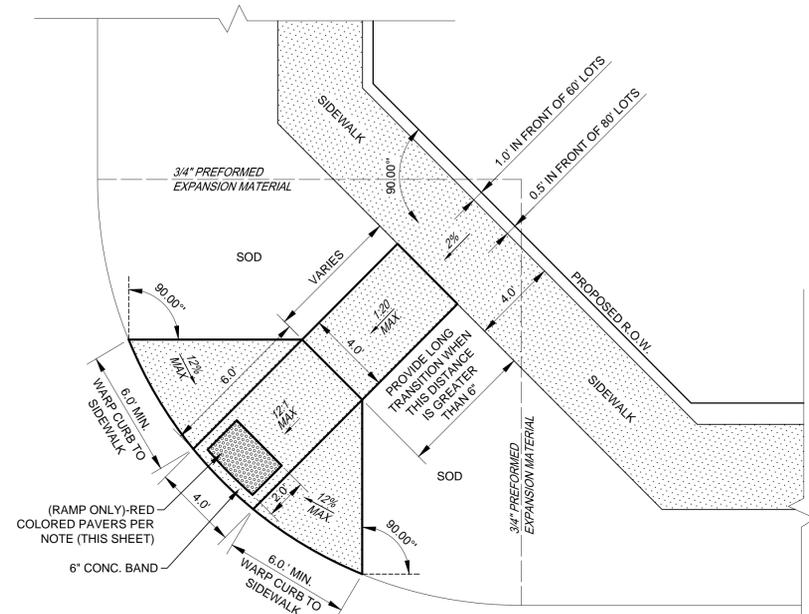
NOTE: PAVERS WILL HAVE DETECTABLE WARNING THAT CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9 IN. (23MM), A HEIGHT OF NOMINAL 0.2 IN. (5MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN. (60MM) AND SHALL BE RED IN COLOR



BARRIER FREE RAMP TYPICAL SECTION THRU RESIDENTIAL RAMP
N.T.S.

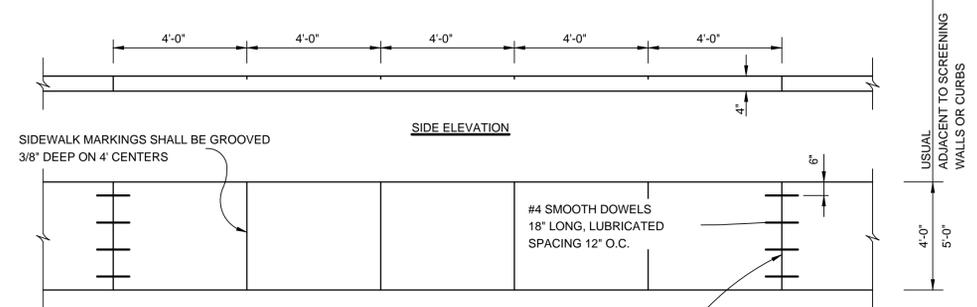


MOUNTABLE CURB DETAILS
N.T.S.

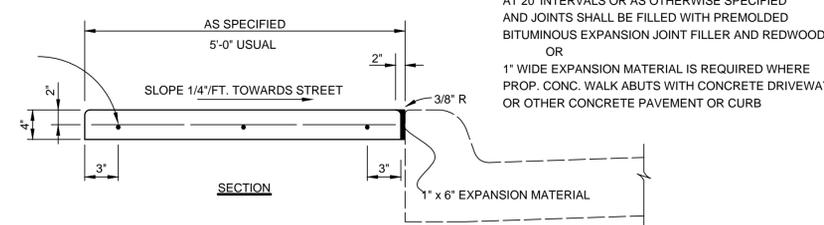


TYPICAL "LONG LANDING" RAMP
N.T.S.

NOTE: PAVERS WILL HAVE DETECTABLE WARNING THAT CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9 IN. (23MM), A HEIGHT OF NOMINAL 0.2 IN. (5MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN. (60MM) AND SHALL BE RED IN COLOR

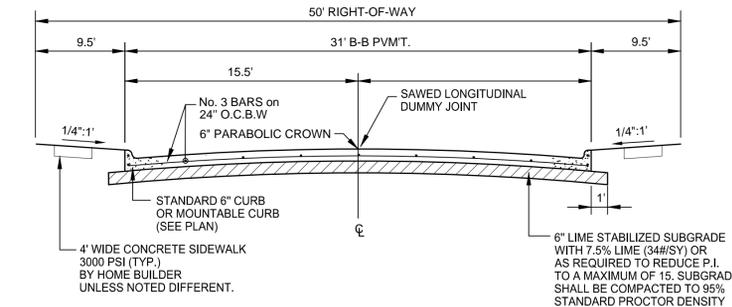


SIDE ELEVATION



SECTION

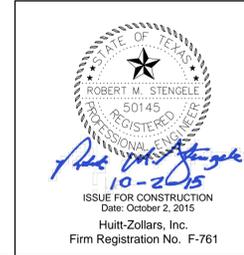
REINFORCED CONCRETE SIDEWALK
N.T.S.



TYPICAL STREET SECTION (50' ROW - 31' B-B)
N.T.S.

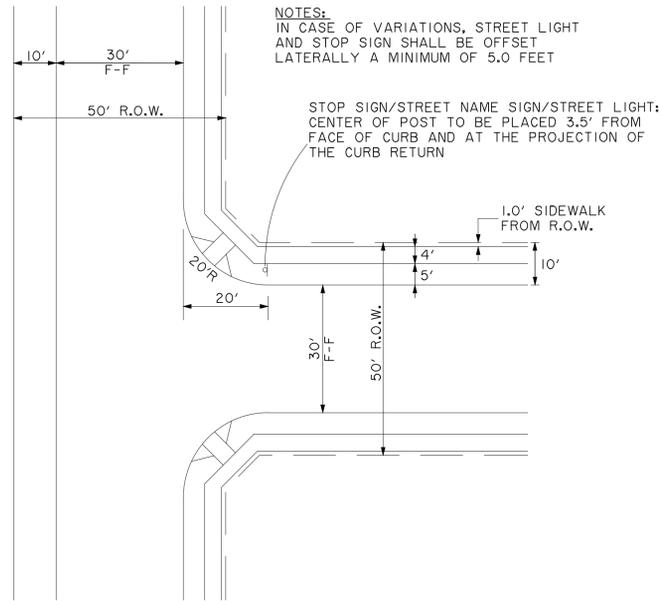
- GENERAL NOTES:**
- BARRIER FREE RAMPS SHALL BE CONSTRUCTED AS EXTENSIONS OF STANDARD CONCRETE SIDEWALKS EXCEPT AS NOTED IN THESE DETAILS.
 - MAXIMUM SLOPE ON BARRIER FREE RAMPS SHALL NOT EXCEED 1" PER FOOT AT ANY LOCATION.
 - DESIGNS SHOWN ARE FOR 6" CURBS. FOR CURBS WITH HEIGHT GREATER THAN 6", DIMENSIONS SHALL BE INCREASED PROPORTIONATELY.
 - STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITIONS ON UPGRADE SIDE.
 - LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS WITH THE APPROVAL OF THE DISTRICT ENGINEER.
 - ACCESS RAMP FROM STREET GRADE SHALL HAVE DETECTABLE WARNING GROVES THAT SHALL BE 1/4" TO 3/4" WIDE, 1/8" DEEP, SPACED 2" APART.
 - ALL LANDINGS ARE TO BE 4'x4' AREAS WITH 2% (MAX) SLOPES IN ANY DIRECTION.
 - ALL BARRIER FREE RAMPS SHALL BE CONSTRUCTED TO MEET ALL ADA AND TDLR REQUIREMENTS.

RAMP WITH DOMES

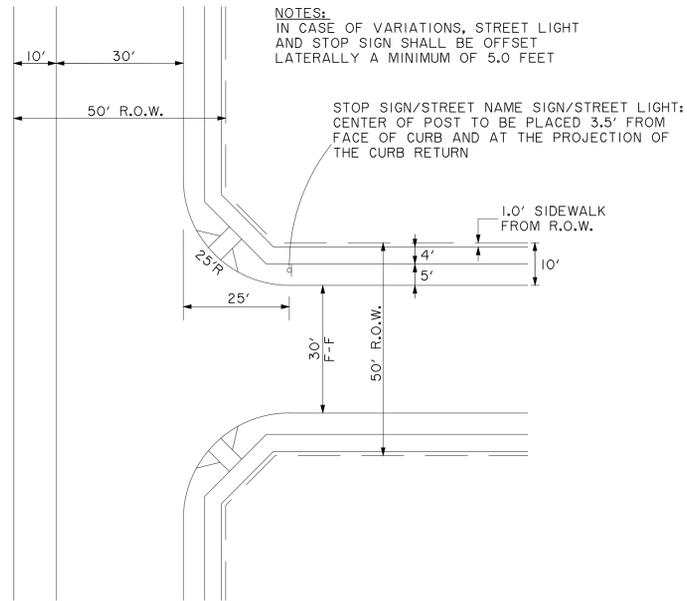


DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	
REVISIONS AND ISSUE DATES		
LIGHT FARMS		
STANDARD PAVING DETAILS		
MAYDELLE NEIGHBORHOOD - PH 2		
COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1		
COLLIN COUNTY, TEXAS		
LFC LAND COMPANY, LLC		
8401 North Central Expressway, Suite 350, Dallas, Texas 75225 Phone (214) 292-3410 Fax (214) 292-3411		
HUITT-ZOLLARS Huitt-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757		SCALE DATE OCT 2, 2015
		SHEET No. 21

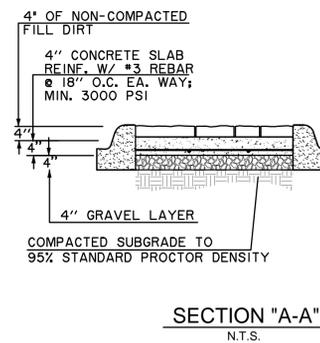
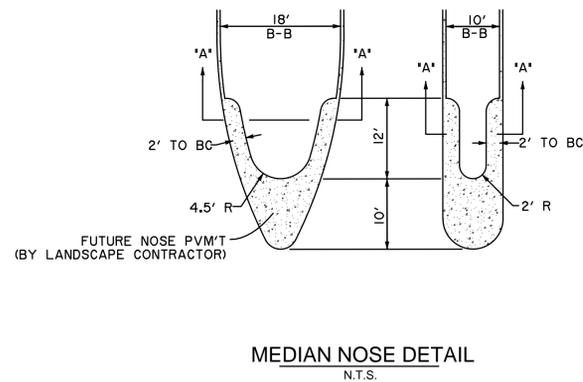
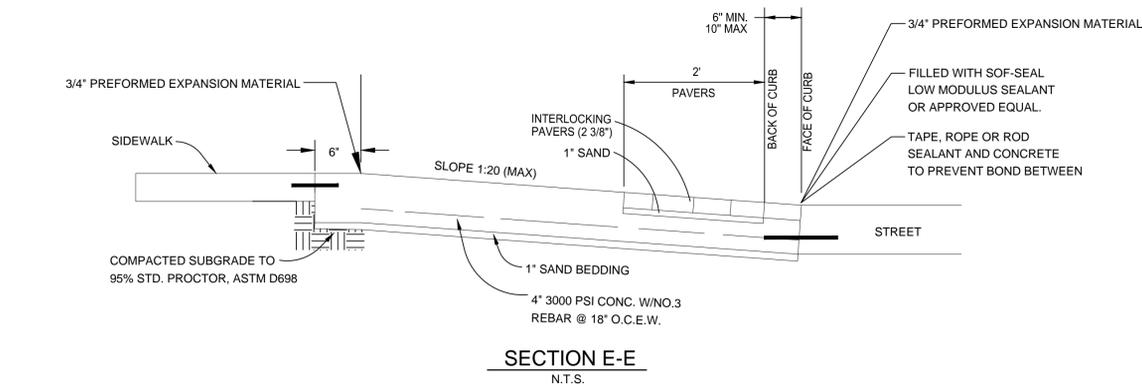
CAD FILE PATH: I:\PROJ\1390501\1390532-80\LOTS\DWG\PHASE I\SHSHEETS\01390553-C021-PAY DETS.DWG



TYPICAL STREET LIGHT LOCATION DETAIL (20' R)
N.T.S.



TYPICAL STREET LIGHT LOCATION DETAIL (25' R)
N.T.S.

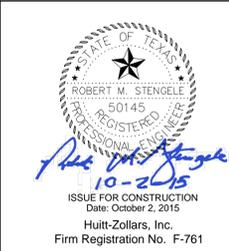


BASIS OF VERTICAL DATUM - NAVD 1988 based on National Geodetic Survey Benchmarks N-185 (Elevation 650.78') and H263 (Elevation - 643.61')

BENCHMARKS:

BM # 79 - Brass monument set on top of curb, southeast side of Light Farms Way, 520+- feet southwesterly from the centerline of Wildrye Ridge.
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DATE	DESCRIPTION	REV. No.
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LIGHT FARMS

STANDARD PAVING DETAILS

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUILT-ZOLLARS Huilt-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757	SCALE	SHEET No.
	DATE	22



Cast Aluminum Backplate Highlights:

Heavy cast aluminum design with 1" wide and 3/4" thick raised border.
 Designed to accept D.O.T. standard street signs in sizes and shapes below.
 Easy installation on 3", 4" or 5" O.D., straight, round poles, with no alterations to pole, with two (2) of our 3", 4" or 5" mounting collars.

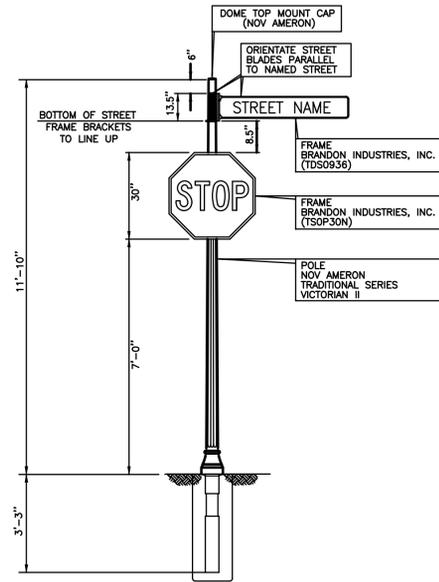
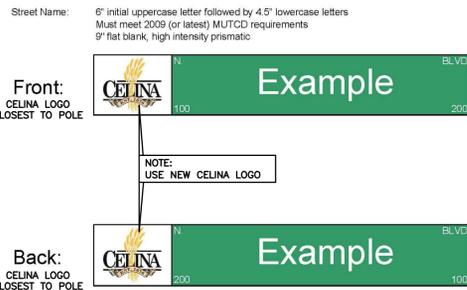
Installation on 3", 4" or 5" O.D., tapered round poles, may be accomplished by using our 3", 4" or 5" mounting collars with extra set screws for leveling.
 All Stainless Steel hardware.
 Durable Powder coat finish, (Medium Gloss Black Polyester, Standard).

Custom colors available.
 18" Stop Signs available for golf course cart path application.
 Applied Vinyl, aluminum, D.O.T. standard, street signs are available but not included. (See our "SIGN" section)

Ordering Information:

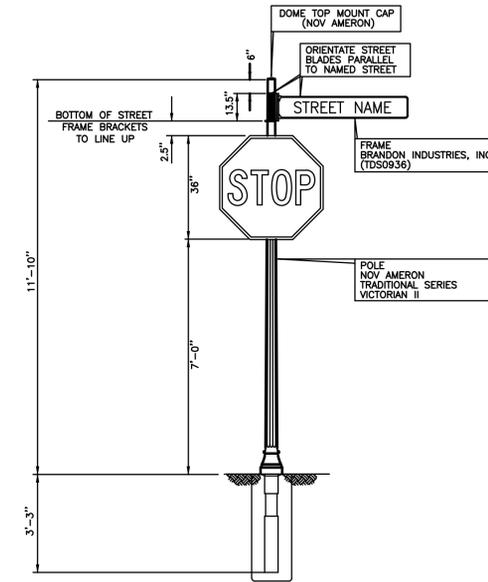
Sample catalog number	Mounting collar size and type
#TSC-24x24-D-4S-BLK	3S Two 3" Mounting Collars for 3" straight pole
Type Size Orientation Mounting Color	4S Two 4" Mounting Collars for 4" straight pole
TSC 24x24 D 4S BLK	5S Two 5" Mounting Collars for 5" straight pole
Stop Sign - Cast Aluminum Back plate, with two mta. collars:	3T Two 3" Mounting Collars for tapered pole
Type & Nominal Size Actual size of Stop Sign	4T Two 4" Mounting Collars for tapered pole
STC-18 18" (For Golf Courses Only)	5T Two 5" Mounting Collars for tapered pole
STC-24 24"	6ST Two 6.5" x 2" Mounting collars for tapered poles
STC-30 30"	BOS Two Bolt or strap on brackets for any pole
STC-36 36"	
Traffic Sign - Cast Aluminum Back plate with two mta. collars:	Colors
Type & Nominal Size Actual size of Sign	BLK Medium Gloss Black Polyester (Standard)
TSC-6x12 6" x 12" (Needs only one mta. collar)	BLKP Medium Gloss Black Polyester, Orange Peel Texture.
TSC-12x18 12" x 18"	RAL-6012 Dark Green Polyester
TSC-18x18 18" x 18"	WHT White Polyester
TSC-18x24 18" x 24"	CC Custom Colors.
TSC-24x24 24" x 24"	
TSC-24x30 24" x 30"	
TSC-30x30 30" x 30"	
Orientation of Traffic Sign	Notes
D Diamond	1. Contact us for pricing.
Yield Sign - Cast Aluminum Back plate, with two mta. collars:	2. Mounting collars are shipped in separate, individual boxes.
Type & Nominal Size Actual size of Sign	3. Applied Vinyl, aluminum, D.O.T. standard, street signs are available but not included. (See our "SIGN" section)
YDC-30 30"	4. Tapered poles must be accurately measured at of mounting points.
YDC-36 36"	Next size collar must be used when pole diameter is larger than standard size.

Celina Street Sign Example



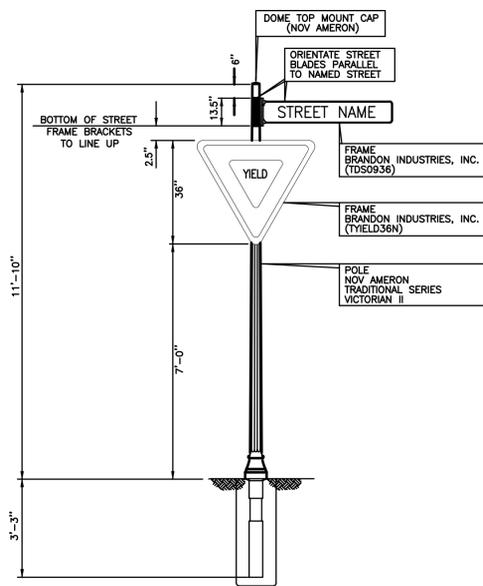
TYPICAL SIGN & POLE DETAIL
 30" STOP SIGN
 NTS

NOTE:
 USE MANUFACTURERS
 INSTALLATION GUIDELINES
 AND PROCEDURES.
 (PER CITY APPROVAL)



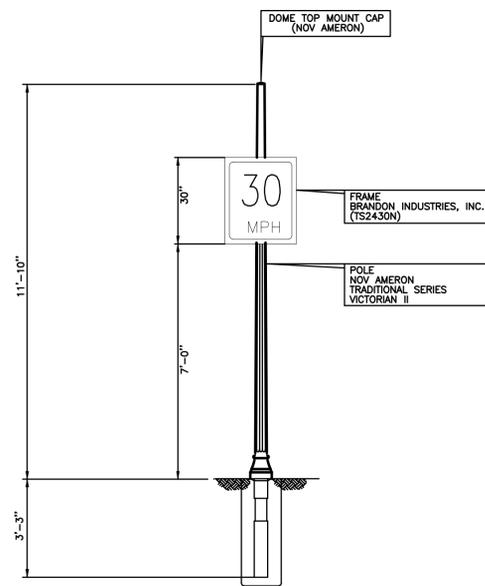
TYPICAL SIGN & POLE DETAIL
 36" STOP SIGN
 (Cypress Creek Way At Frontier Parkway)
 NTS

NOTE:
 USE MANUFACTURERS
 INSTALLATION GUIDELINES
 AND PROCEDURES.
 (PER CITY APPROVAL)



TYPICAL SIGN & POLE DETAIL
 36" X 36" YIELD SIGN
 NTS

NOTE:
 USE MANUFACTURERS
 INSTALLATION GUIDELINES
 AND PROCEDURES.
 (PER CITY APPROVAL)



TYPICAL SIGN & POLE DETAIL
 24" X 30" SPEED LIMIT SIGN
 NTS

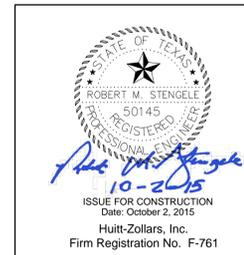
NOTE:
 USE MANUFACTURERS
 INSTALLATION GUIDELINES
 AND PROCEDURES.
 (PER CITY APPROVAL)

MANUFACTURERS

BRANDON INDUSTRIES, INC.
 1601 W. WILMETH ROAD
 MCKINNEY, TEXAS
 75069-8250
 PHONE: 1-800-247-1274

NOV AMERON
 SOUTH CENTRAL DIVISION
 8505 CLAY HIBBINS ROAD
 KELLER, TEXAS
 76248
 PHONE: 817-999-6867

SPECIFICATIONS ARE NOT MEANT TO EXCLUDE ANY OTHER MANUFACTURER.
 ANY SPECIFICATION MAY BE REPLACED WITH AN APPROVED EQUAL UPON
 APPROVAL BY THE CITY OF CELINA.



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

REVISIONS AND ISSUE DATES

LIGHT FARMS

STANDARD SIGNAGE DETAILS

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

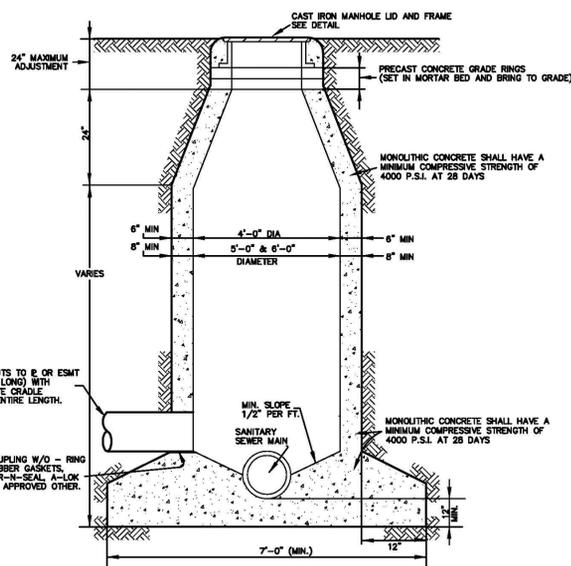
COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
 8401 North Central Expressway, Suite 350, Dallas, Texas 75225
 Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLIARS
 Huitt-Zollars, Inc. Dallas
 1717 McKinney Avenue, Suite 1400
 Dallas, Texas 75202-1236
 Phone (214) 871-3311 Fax (214) 871-0757

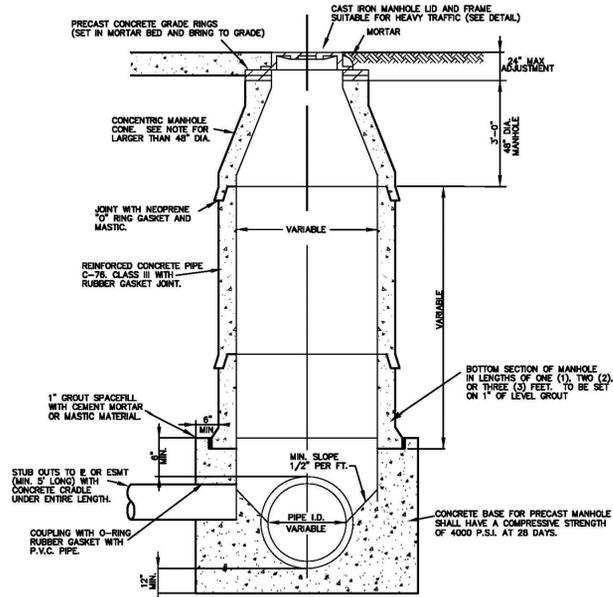
SCALE SHEET No.
 DATE OCT 2, 2015
 23

CAD FILE PATH: c:\proj\01390501\01390533-0223-SIGN (DET).dwg



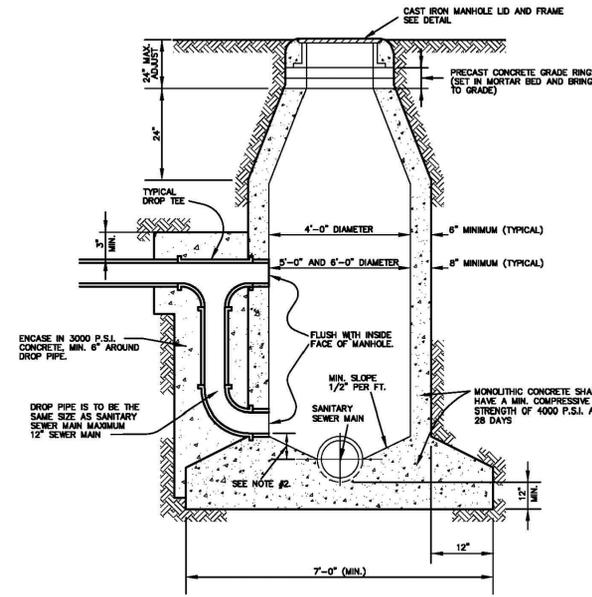
- NOTES:
1. THE DIAMETER OF A MANHOLE CONSTRUCTED OVER THE CENTER OF A SEWER SHOULD VARY WITH THE SIZE OF THE SEWER. FOR EIGHT-INCH (8"), TEN-INCH (10"), AND TWELVE-INCH (12"), THE MANHOLE SHALL BE FOUR-FOOT (4') MINIMUM DIAMETER. FOR FIFTEEN-INCH (15"), EIGHTEEN-INCH (18"), TWENTY-ONE-INCH (21"), TWENTY-FOUR-INCH (24") AND TWENTY-SEVEN-INCH (27") SHALL BE FIVE-FOOT (5') MINIMUM DIAMETER. THIRTY-INCH (30") AND THIRTY-SIX-INCH (36") SHALL BE SIX-FOOT (6') MINIMUM DIAMETER. MANHOLES DEEPER THAN FIFTEEN FEET (15') SHALL BE A MINIMUM OF FIVE-FOOT (5') DIAMETER.
 2. DROP MANHOLES SHALL BE REQUIRED WHEN THE INFLOW ELEVATION IS MORE THAN TWENTY-FOUR INCHES (24") ABOVE THE OUTFALL ELEVATION.
 3. WHERE PIPES ENTER A MANHOLE THERE SHALL BE A MINIMUM OF TWO-TENTHS OF A FOOT (0.2') DROP BETWEEN INVERTS.
 4. WHERE UNEQUAL PIPES ENTER A MANHOLE, THE CROWN OF THE PIPES SHALL BE SET AT THE SAME ELEVATION.
 5. CONCRETE SHALL BE A MONOLITHIC POUR.

STANDARD CAST IN PLACE MANHOLE (NTS)



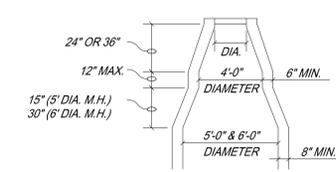
- NOTES:
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 3. WHERE PIPES ENTER A MANHOLE THERE SHALL BE A MINIMUM OF TWO-TENTHS OF A FOOT (0.2') DROP BETWEEN INVERTS.
 4. WHERE UNEQUAL PIPES ENTER A MANHOLE, THE CROWN OF THE PIPES SHALL BE SET AT THE SAME ELEVATION.

STANDARD PRECAST MANHOLE (NTS)



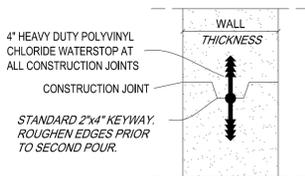
- NOTES:
1. THE DIAMETER OF A MANHOLE CONSTRUCTED OVER THE CENTER OF A SEWER SHOULD VARY WITH THE SIZE OF THE SEWER. FOR EIGHT-INCH (8"), TEN-INCH (10"), AND TWELVE-INCH (12"), THE MANHOLE SHALL BE FOUR-FOOT (4') MINIMUM DIAMETER. FOR FIFTEEN-INCH (15"), EIGHTEEN-INCH (18"), TWENTY-ONE-INCH (21"), TWENTY-FOUR-INCH (24") AND TWENTY-SEVEN-INCH (27") SHALL BE FIVE-FOOT (5') MINIMUM DIAMETER. THIRTY-INCH (30") AND THIRTY-SIX-INCH (36") SHALL BE SIX-FOOT (6') MINIMUM DIAMETER. MANHOLES DEEPER THAN FIFTEEN FEET (15') SHALL BE A MINIMUM OF FIVE-FOOT (5') DIAMETER.
 2. FLOWLINE OF DROP SHALL BE LOCATED BETWEEN THE CENTERLINE AND TOP OF SEWER MAIN.
 3. WHERE PIPES ENTER A MANHOLE THERE SHALL BE A MINIMUM OF TWO-TENTHS OF A FOOT (0.2') DROP BETWEEN INVERTS.
 4. WHERE UNEQUAL PIPES ENTER A MANHOLE, THE CROWN OF THE PIPES SHALL BE SET AT THE SAME ELEVATION.
 5. CONCRETE SHALL BE A MONOLITHIC POUR.

MANHOLE DROP CONNECTION (NTS)

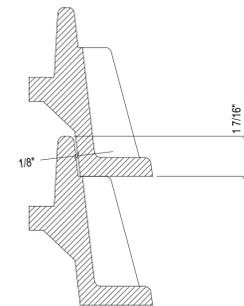


CONE TRANSITION
5' & 6' DIAMETER MANHOLES ONLY

MANHOLE CONE NOTE:
FOR MANHOLES WITH DIAMETER LARGER THAN 48" I.D., A PRE-CAST FLAT TOP MANHOLE COVER AS PER A.S.T.M. C478 SHALL BE INSTALLED.

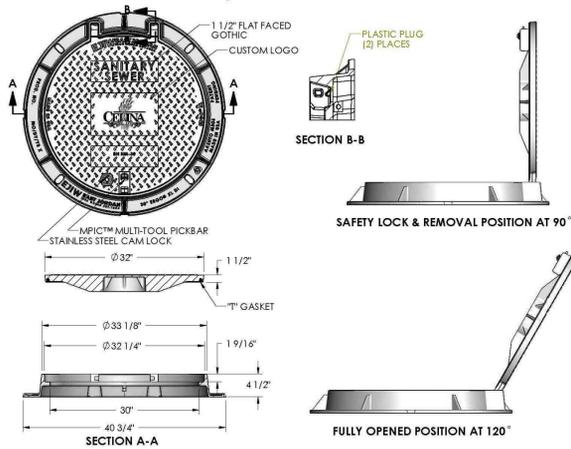


MANHOLE CONSTRUCTION JOINT KEYWAY WITH WATERSTOP



STACK DETAIL (NTS)

ERGO XL Assembly



Product Number
NPR12-1895A

Design Features
-Materials
Cover: Ductile Iron (80-55-06)
Frame: Ductile Iron (80-55-06)

-Design Load
Heavy Duty

-Open Area
via

-Coating
Undipped

-Designated Matched Surface
-Slip Resistant Surface with the LLLL® registered trademark

Certification
-ASTM A536
-Country of Origin: USA

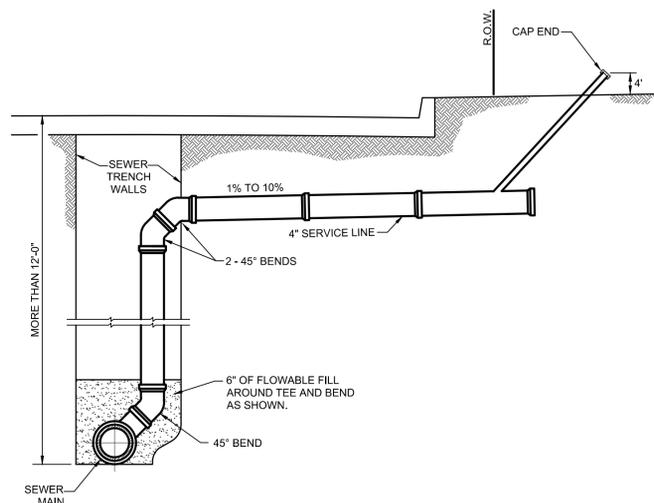
Major Components
LC0014803X
LF300454075

Drawing Revision
6/16/2012 Designer: SDC
2/19/2012 Revised By:

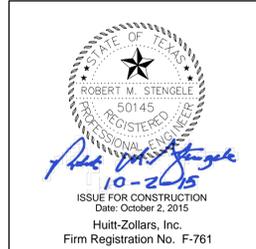
Disclaimer
We warrant that the dimensions (incl. weight) and design shown on this drawing are the property of E.J. Group, Inc. and are not to be used, copied, or reproduced in any form without the written permission of E.J. Group, Inc. All rights reserved.

Contact
800.626.4863
ejco.com

BASS & HAYS 30 INCH MANHOLE COVER AND FRAME NTS



DEEP SEWER SERVICE



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	
REVISIONS AND ISSUE DATES		

LIGHT FARMS

STANDARD SANITARY SEWER DETAILS

MAYDELLE NEIGHBORHOOD - PH 2
COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

LFC LAND COMPANY, LLC
8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

HUITT-ZOLLARS Huitt-Zollars, Inc. Dallas 1717 McKinney Avenue, Suite 1400 Dallas, Texas 75202-1236 Phone (214) 871-3311 Fax (214) 871-0757	SCALE	SHEET No.
	DATE	24

EROSION CONTROL GENERAL NOTES

1. DISTURBED AREAS WHERE CONSTRUCTION HAS PERMANENTLY OR TEMPORARILY CEASED MUST BE STABILIZED WITHIN 14 DAYS OF THE LAST DISTURBANCE. AREA WHICH WILL BE RE-DISTURBED WITHIN 21 DAYS NEED NOT BE STABILIZED.
2. EROSION CONTROL MEASURES WILL BE ACTIVELY MAINTAINED UNTIL FINAL STABILIZATION OF THE DISTURBED AREA. IF EROSION CONTROL MEASURES ARE REMOVED FOR CONSTRUCTION OR ACCESS PURPOSES, CONTRACTOR SHALL REPLACE ALL ITEMS AT THE END OF EACH WORK DAY.
3. AFTER INSTALLATION OF PAVEMENT, FINAL GRADING AND GENERAL CLEANUP, ALL DISTURBED AREAS SHALL BE HYDROMULCHED OR CULTPACK SEEDED. SEE SEEDING SPECIFICATIONS THIS SHEET.
4. EROSION CONTROL MEASURES REQUIRE MAINTENANCE, CLEANING AND REPLACEMENT AS REQUIRED. EROSION CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS OF A RAIN FALL ONE-HALF INCH OR GREATER BY AN AGENT DESIGNATED BY THE OPERATOR AND A WRITTEN REPORT SHALL BE MAINTAINED.
5. EXCAVATED TRENCHES AND UTILITY SPOILS SHALL BE BACKFILLED OR STOCKPILED AT THE END OF EACH DAY.
6. STOCKPILED MATERIALS SHALL BE SURROUNDED BY SILT BARRIER FENCE OR HAY BALES PER THE DETAILS. ALTERNATE: SMALL STOCKPILED AREAS MAY BE COVERED WITH WATER REPELLANT TARP OR PLASTIC AS APPROVED BY THE OPERATOR.
7. SOILS IN PARKWAYS TO BE CHAIN HARROWED OR CHAIN DRAGGED PRIOR TO SEEDING. AFTER SEEDING, PARKWAYS TO BE MAINTAINED UNTIL A STAND OF GRASS HAS BEEN ACCOMPLISHED AND APPROVED BY THE CITY.

INSTALLATION SEQUENCE

- PHASE 1 - INITIAL INSTALLATION OF SILT FENCE SHALL BE INSTALLED PRIOR TO CLEARING THE SITE FOR ESTABLISHING ROUGH GRADES. INSTALLATION OF SILT FENCE AND STONE OVERFLOW STRUCTURES SHALL BE PRESERVED BY THE EXCAVATION CONTRACTOR. IF DURING THE COURSE OF CLEARING AND EXCAVATION, THE EXCAVATION CONTRACTOR DESTROYS ANY OF THESE FACILITIES, THEN IT SHALL BE THE RESPONSIBILITY OF THE EXCAVATION CONTRACTOR TO REPLACE THE FACILITIES TO THE STATE IN WHICH HE FOUND THEM WHEN HE MOBILIZED.
- PHASE 2 - IF REQUIRED INSTALLATION OF SILT FENCE OR STONE OVERFLOW STRUCTURES, AS SHOWN, SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF ANY DRAINAGE FACILITIES AND AFTER INLET BOTTOMS ARE POURED. IT SHALL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY TO PRESERVE AND/OR REPLACE ANY FACILITIES PREVIOUSLY INSTALLED DURING PHASE 1 IF DESTROYED.
- PHASE 3 - CURLEX SHALL BE INSTALLED AFTER THE PAVING CONTRACTOR HAS BACKFILLED ALL STREET CURBS. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING AND/OR REPLACING ANY PREVIOUSLY INSTALLED FACILITIES WHICH ARE DESTROYED AS A RESULT OF CONSTRUCTING ANY AND ALL PAVING FACILITIES.
- PHASE 4 - ALL DISTURBED AREAS SHALL BE SEEDED AFTER THE EXCAVATION CONTRACTOR HAS COMPLETED THE FINAL GRADING WITHIN THE DEVELOPMENT.

NOTE: ALL PROPOSED STORMWATER POLLUTION PREVENTION DEVICES SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR AND SHALL BE PAID FOR PER A UNIT PRICE CONTRACT.

SEEDING SPECIFICATIONS

- CULTPACK SEEDING SPECIFICATIONS**
- WINTER RYE SEED (FALL AND WINTER) 65 LB/ACRE
 - COMMON BERMUDA SEED (SPRING AND SUMMER) 65 LB/ACRE
 - 17/17/17 FERTILIZER 380 LB/ACRE

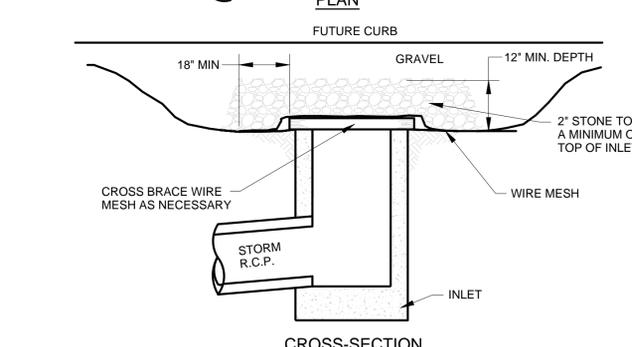
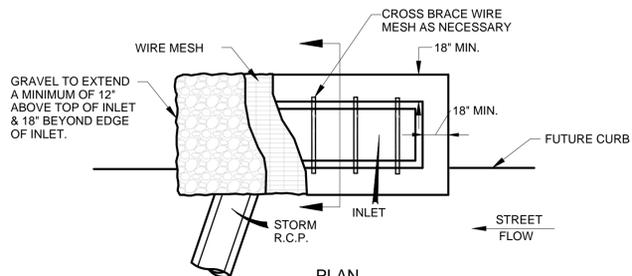
- HYDROMULCH SEEDING SPECIFICATIONS**
- WINTER RYE SEED (FALL AND WINTER) 65 LB/ACRE
 - COMMON BERMUDA SEED (SPRING AND SUMMER) 65 LB/ACRE
 - 17/17/17 FERTILIZER 380 LB/ACRE
 - WOOD CELLULOSE MULCH FIBER 2000 LB/ACRE

NOTE: SOIL TO BE SEEDED SHALL BE CHAIN HARROWED OR CHAIN DRAGGED PRIOR TO SEEDING. AFTER SEEDING, PARKWAYS TO BE MAINTAINED UNTIL A STAND OF GRASS HAS BEEN ACCOMPLISHED AND APPROVED BY THE OPERATOR

OTHER NOTES

1. SOLID NON-HAZARDOUS CONSTRUCTION WASTE SHALL BE DISPOSED OF IN A TRASH DUMPSTER OR APPROVED EQUAL IN A LOCATION APPROVED BY THE OPERATOR. POTENTIALLY SOLUBLE OR LEACHABLE SOLID WASTE SHALL BE STORED OFF THE GROUND AND IN COVERED LEAK-PROOF CONTAINERS. SOLID WASTE SHALL BE PROPERLY DISPOSED OF OFF-SITE ON A REGULAR BASIS.
2. HAZARDOUS WASTE SHALL BE SEGREGATED FROM NON-HAZARDOUS CONSTRUCTION SITE DEBRIS. LIQUID OR SEMI-LIQUID HAZARDOUS WASTE SHALL BE STORED IN APPROPRIATE CONTAINERS AND SHALL BE KEPT UNDER COVER. GRANULAR, SOLUBLE OR LEACHABLE HAZARDOUS WASTE MATERIALS SHALL BE STORED OFF THE GROUND AND IN COVERED LEAK-PROOF CONTAINERS. HAZARDOUS WASTE STORAGE AREA LOCATIONS SHALL BE PROPERLY APPROVED BY THE OPERATOR. HAZARDOUS WASTE SHALL BE PROPERLY DISPOSED OF OFF-SITE ON A REGULAR BASIS BY A REPUTABLE, LICENSED HAZARDOUS WASTE HAULER.
3. FRESH CONCRETE WASTE OR CONCRETE EQUIPMENT WASHDOWNS SHALL BE CONTAINED IN AN AREA APPROVED BY THE OPERATOR. CONTRACTOR SHALL ENSURE THAT AN ADEQUATE VEGETATIVE BUFFER IS PRESENT AROUND CONCRETE WASHOUT AREAS.
4. ALL WASTE MATERIALS SHALL BE STORED AWAY FROM DRAINAGE DITCHES, SWALES AND DRAINAGE STRUCTURES. WHERE APPROPRIATE, CONTAINMENT BERMS SHALL BE PLACED AROUND WASTE STORAGE AREAS.
5. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO CONTROL DUST GENERATED DURING CONSTRUCTION ACTIVITIES.
6. CONTRACTOR SHALL CONSTRUCT APPROPRIATE ENTRYWAYS TO PROHIBIT THE TRACKING OF DIRT AND DEBRIS OFF-SITE.
7. A CENTRALLY LOCATED PORT-A-JOIN SHALL BE PLACED AND MAINTAINED ON A PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
8. EQUIPMENT MAINTENANCE, REPAIR, AND WASHDOWNS SHALL BE PERFORMED OFF-SITE OR IN LOCATIONS APPROVED BY THE OPERATOR.
9. A COPY OF THE SWPPP SHALL BE KEPT ON-SITE FOR THE ENTIRE CONSTRUCTION PERIOD. THE NOI ASSOCIATED WITH THIS SWPPP SHALL BE PROPERLY DISPLAYED ON-SITE FOR THE ENTIRE CONSTRUCTION PERIOD.
10. A NOTICE OF TERMINATION (NOTI) SHALL BE FILED FOR THE PROJECT UPON CITY ACCEPTANCE OF THE PROJECT AND AFTER FINAL STABILIZATION HAS BEEN ACHIEVED AND THE RESPONSIBILITY FOR CONTINUED STORM WATER MANAGEMENT/EROSION CONTROL SHALL BECOME THAT OF THE BUILDER, CITY, OR OTHER APPROPRIATE ENTITY.
11. COMPLETE INSPECTION RECORDS PERTAINING TO THIS NOI AND SWPPP MUST BE MAINTAINED BY THE OPERATOR FOR A PERIOD OF THREE YEARS FOLLOWING FINAL STABILIZATION.

BMP MAINTENANCE SCHEDULE		
BMP	MAINTENANCE FREQ.	BY:
TEMP STONE CONST. ENTRANCE	WEEKLY AND AFTER RAIN STORM EVENTS	OPERATOR
ROCK CHECK DAMS	WEEKLY AND AFTER RAIN STORM EVENTS	OPERATOR
SILT FENCE	WEEKLY AND AFTER RAIN STORM EVENTS	OPERATOR
INLET PROTECTION	WEEKLY AND AFTER RAIN STORM EVENTS	OPERATOR

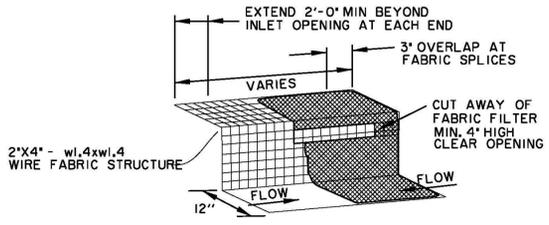


INLET PROTECTION WIRE MESH & GRAVEL

NCTCOG 02270.G
STORM WATER QUALITY
BEST MANAGEMENT PRACTICES
FOR CONSTRUCTION ACTIVITIES

DETAIL 'C'
N.T.S.

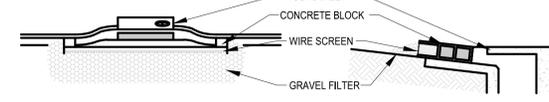
CONTRACTOR SHALL INTERCEPT FLOW AND INSTALL INLET PROTECTION MEASURES AS SOON AS PRACTICABLE.



CURB INLET PROTECTION

N.T.S.

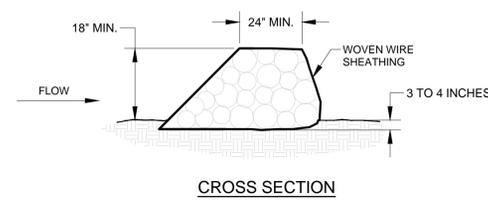
METHODOLOGY APPLIES TO RECESSED AND STANDARD CURB INLETS. CARE SHOULD BE TAKEN TO KEEP MEASURE OUT OF TRAFFIC.



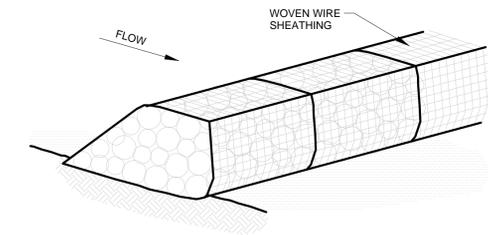
CURB INLET PROTECTION

DETAIL 'F'

N.T.S.



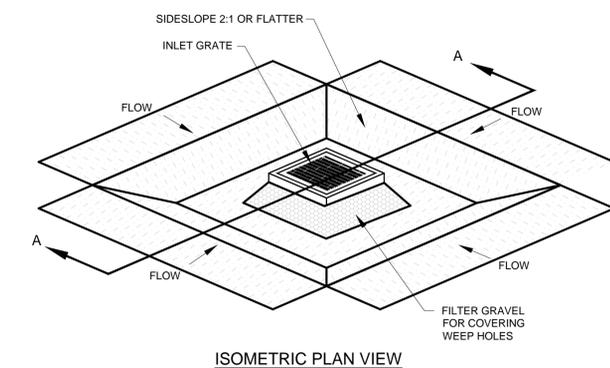
CROSS SECTION



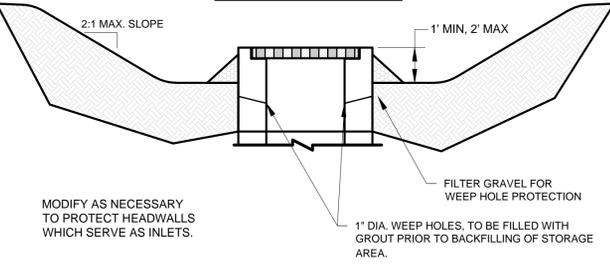
ISOMETRIC PLAN VIEW

ROCK BERM

DETAIL 'E'
N.T.S.



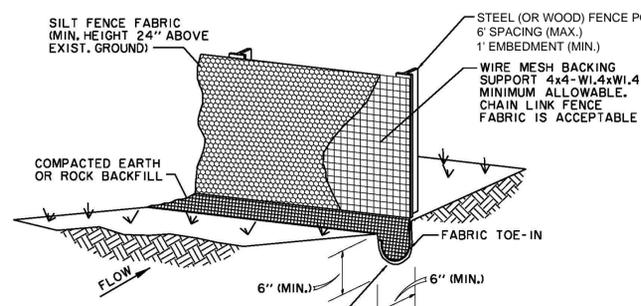
ISOMETRIC PLAN VIEW



SECTION A-A

EXCAVATED IMPOUNDMENT INLET PROTECTION

DETAIL 'D'
N.T.S.



SILT FENCE

NCTCOG 02270.B
STORM WATER QUALITY
BEST MANAGEMENT PRACTICES
FOR CONSTRUCTION ACTIVITIES

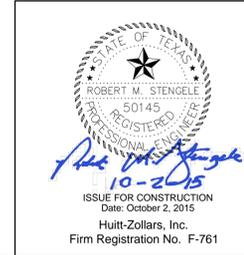
DETAIL 'B'
N.T.S.

NOTE TO ALL CONTRACTORS

1. IN ACCORDANCE WITH THE REQUIREMENTS OF THE T.P.D.E.S. GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITES, ALL CONTRACTORS AND SUBCONTRACTORS SHALL AT ALL TIMES TAKE NECESSARY MEASURES TO PREVENT THE FLOW OF SEDIMENT AND OTHER MATERIALS FROM THE WORK SITE INTO THE STORM SEWER SYSTEM OR TO ANY RECEIVING WATER, SUCH MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE PLACEMENT OF EROSION DIKES AND INLET PROTECTION, SILT FENCE, RIP RAP STABILIZATION, SEEDING, SODDING, ETC. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, PAYMENT FOR THIS WORK WILL BE INCLUSIVE UNDER THE LINE ITEM IN THE BID DOCUMENTS FOR EROSION CONTROL.
2. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE INSTALLATION AND MAINTENANCE OF THE SEDIMENT CONTROL MEASURES AT THE SITE AS OF THE DATE OF HIS NOTICE TO PROCEED.
3. A NOTICE OF TERMINATION SHOULD BE FILED UPON OWNER'S/ENGINEER'S ACCEPTANCE OF FINAL GRADING AND ACHIEVEMENT OF A FINALLY STABILIZED CONSTRUCTION SITE.

SILT FENCE GENERAL NOTES:

1. STEEL (OR WOOD) POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE FENCE POST.
5. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
6. INSPECTION SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
7. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.



DATE	DESCRIPTION	REV. No.
10/2/15	ISSUE FOR CONSTRUCTION	

LIGHT FARMS

EROSION CONTROL DETAILS

MAYDELLE NEIGHBORHOOD - PH 2

COLLIN COUNTY MUNICIPAL UTILITY DISTRICT NO.1

COLLIN COUNTY, TEXAS

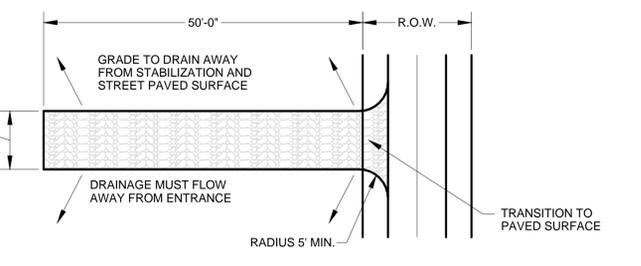
LFC LAND COMPANY, LLC

8401 North Central Expressway, Suite 350, Dallas, Texas 75225
Phone (214) 292-3410 Fax (214) 292-3411

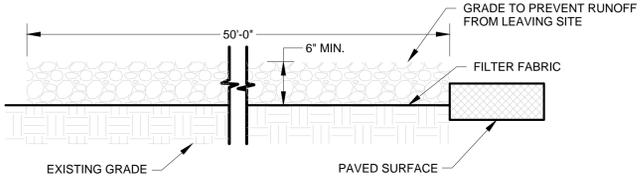
HUITT-ZOLLARS

Huitt-Zollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400
Dallas, Texas 75202-1236
Phone (214) 871-3311 Fax (214) 871-0757

SCALE N.T.S.	SHEET No. 25
DATE OCT 2, 2015	



PLAN



PROFILE

STABILIZED CONSTRUCTION ENTRANCE / EXIT

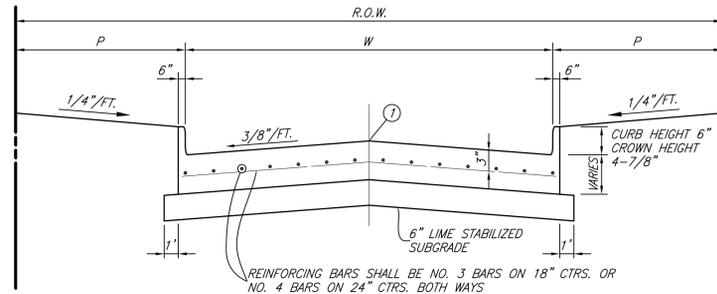
NCTCOG 02270.G
STORM WATER QUALITY
BEST MANAGEMENT PRACTICES
FOR CONSTRUCTION ACTIVITIES

DETAIL 'A'
N.T.S.

The Stabilized Construction Entrance / Exit Is To Be Used As A Vehicle Wash Down Area For Debris And Soil Removal Before Exiting The Site Onto The Existing Roadway. Location For Installation Should Be Identified On The Project's Erosion Control Plan. An Alternate Location Must Be Approved By Owner Or Engineer Prior To Installation. Stabilized Construction Entrance / Exit Shall Be Top Dressed With Additional Stone As Necessary.

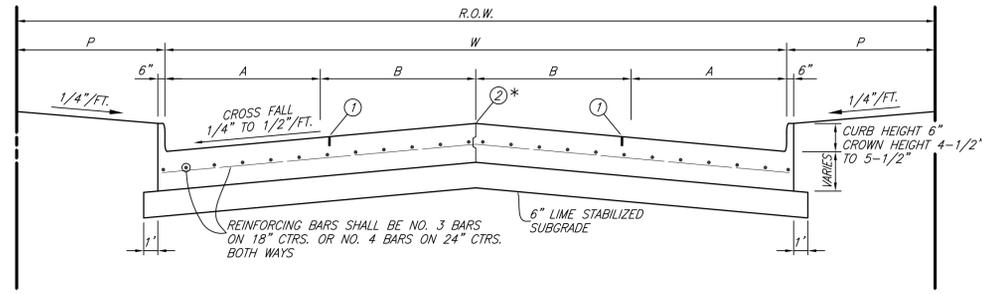
DWC: I:\proj\01390561\01390563-80\iss\DWG\PHASE\INSHET\01390563-C025-ERC DETS.dwg USER: jgan DATE: 06/01/2015 11:04am XREFS: 01390563-80

CAD FILE PATH: I:\proj\01390561\01390563-80\iss\dwg\phase\inshet\01390563-C025-erc.dwg



REGULAR SECTION

R2U
C2U



REGULAR SECTION

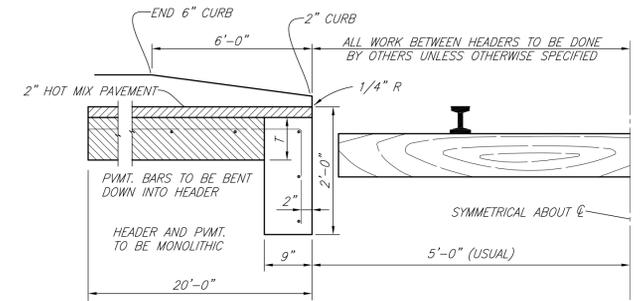
C4U
M4U
M5U

(PARA_SECT)

LEGEND

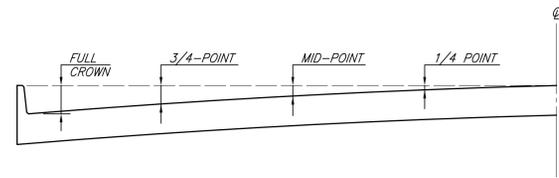
- ① - SAWED LONGITUDINAL DUMMY JOINT
- ② - CONSTRUCTION JOINT (FULL WIDTH PVMT. IS ALLOWED WHERE APPROVED BY CITY)

(LEGEND_PVMT2)



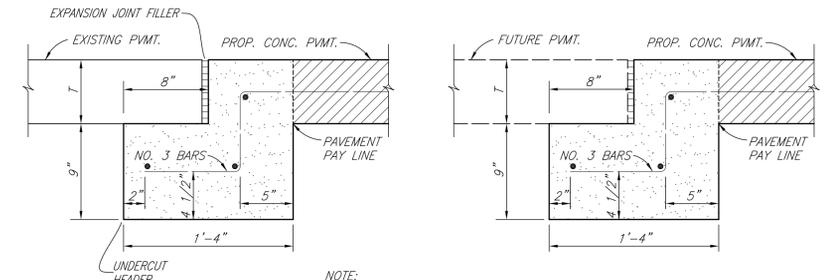
RAIL HEADER

(RR-HEADER)



ROADWAY WIDTH (W)	TOTAL CROWN HEIGHT	3/4 POINT	MID-POINT	1/4 POINT
26'	4"	2-1/4"	1"	1/4"
36'	6"	3-3/8"	1-1/2"	3/8"
44'	6"	3-3/8"	1-1/2"	3/8"

R2U, C2U, C4U, M4U & M5U PAVING SECTIONS SHALL HAVE A MINIMUM PAVEMENT THICKNESS OF 6 INCHES.



NOTE: PAVEMENT BARS TO BE BENT DOWN INTO HEADER. PAVEMENT AND HEADER SHALL BE MONOLITHIC.

STREET HEADER

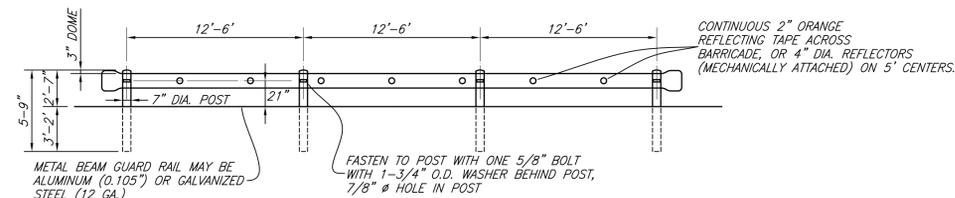
(HEADER)

TABLE OF CROWN HEIGHTS AND ORDINATES FOR VARIOUS PARABOLIC SECTIONS

SLIP-FORM PAVEMENT MUST MEET CROWN GRADES AT GUTTERS, AT MID-POINTS & E

PARABOLIC ROADS ONLY TO BE CONSTRUCTED WITH SLIP FORM PAVERS

(PARA-TABLE)



METAL BEAM GUARD RAIL MAY BE ALUMINUM (0.105) OR GALVANIZED STEEL (12 GA.)

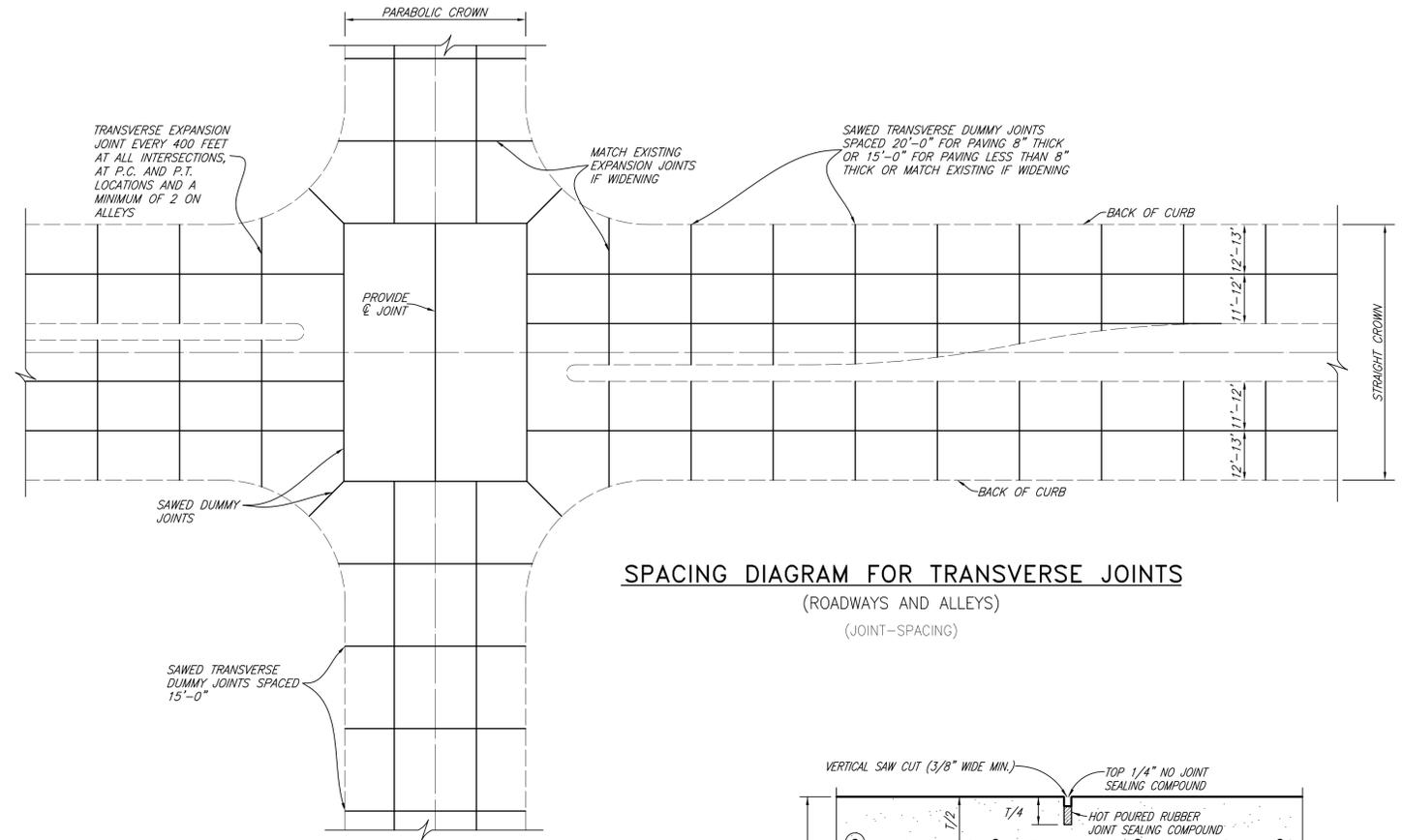
NON CONSTRUCTION BARRICADES (PERMANENT BARRICADES) SHALL CONSIST OF TxDOT GF(TD)-87 METAL BEAM GUARD FENCE WITH TERMINAL CONNECTOR SECTIONS AT EACH END. PERMANENT BARRICADES SHALL BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH TxDOT DETAILS. BARRICADE SHALL EXTEND FROM OUTSIDE CURB TO OUTSIDE CURB.

TYPICAL PERMANENT BARRICADE DETAIL

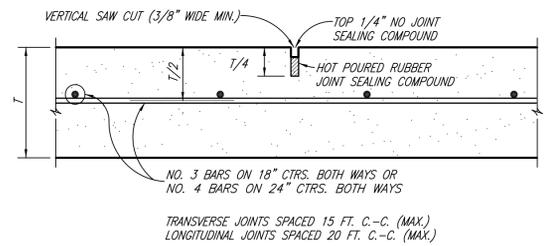
(PERM-BARRICADE)

CITY OF CELINA, TEXAS

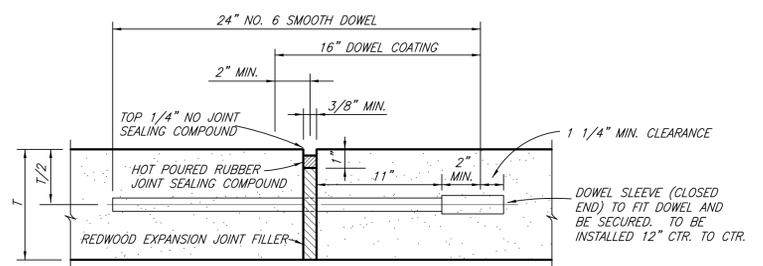
PAVING
STANDARD DETAILS - 26



SPACING DIAGRAM FOR TRANSVERSE JOINTS
(ROADWAYS AND ALLEYS)
(JOINT-SPACING)

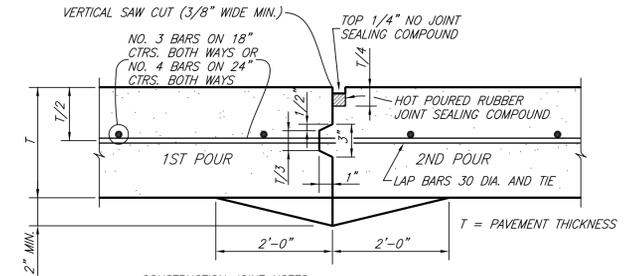


SAWED DUMMY JOINT
(DUMMYJNT)



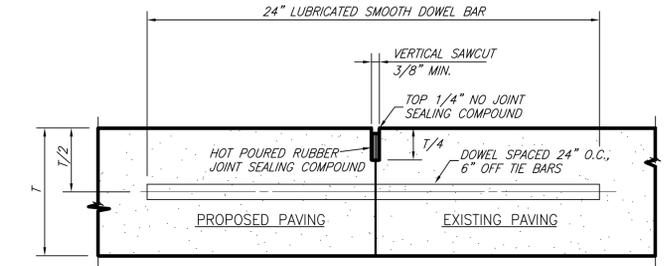
- TRANSVERSE EXPANSION JOINT NOTES:
1. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.
 2. TRANSVERSE EXPANSION JOINTS SHALL BE SPACED AT 400 FT. MAXIMUM AND AT ALL INTERSECTIONS.

TRANSVERSE EXPANSION JOINT
(EXPJNT)



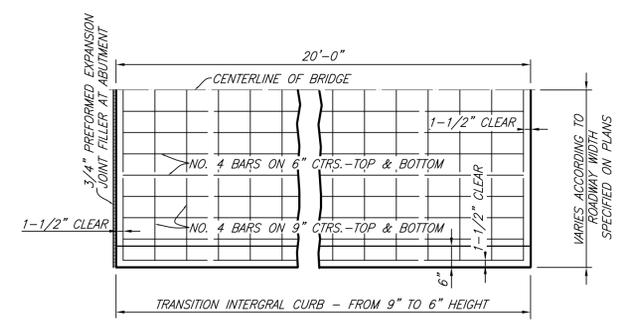
- CONSTRUCTION JOINT NOTES:
1. CONTRACTOR SHALL PROTECT KEYWAY PRIOR TO SECOND POUR. IF LONGITUDINAL KEYWAY IS DAMAGED, CONTRACTOR SHALL REPAIR WITH THE USE OF LONGITUDINAL BUTT JOINT (DRILL DOWELS INTO FIRST POUR).
 2. THICKENED EDGES ARE REQUIRED FOR FUTURE WIDENING ONLY.

CONSTRUCTION JOINT
(CONSTJNT)

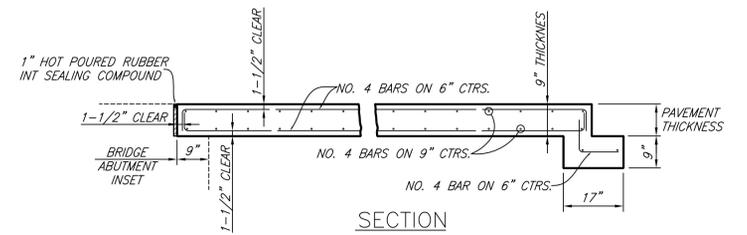


- NOTE:
1. T-8" AND GREATER NO. 6 BAR, T-6" AND LESS NO. 5 BAR
 2. LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HINGED (KEYWAY) JOINT AT CONTRACTORS OPTION.
 3. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG. HAND DRILLING NOT ACCEPTABLE. DAMAGE TO EXISTING PAVEMENT SHALL BE REMOVED BY CONTRACTOR AND JOINT CONSTRUCTED AT CONTRACTORS EXPENSE.
 4. DOWEL BAR SHOWN IS IN ADDITION TO TIE BARS (12" O.C.-6" OFF DOWELS).
 5. TIE BARS SHALL BE NO. 5 BAR DEFORMED. TIE BAR SHALL HAVE A LENGTH OF 24 INCHES.

LONGITUDINAL BUTT JOINT
(BUTTJNT)



PLAN

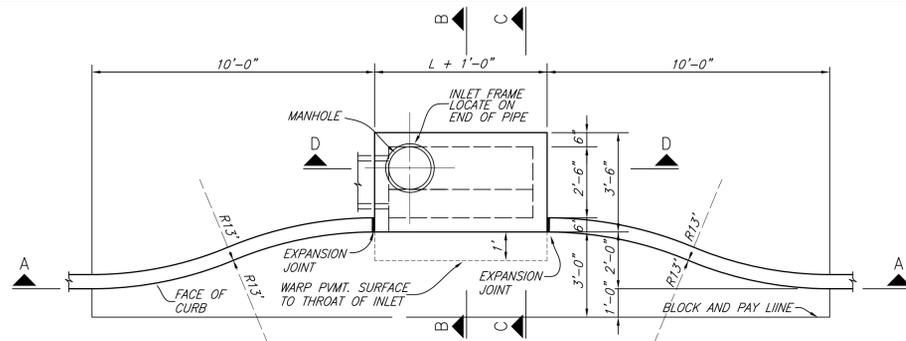


SECTION

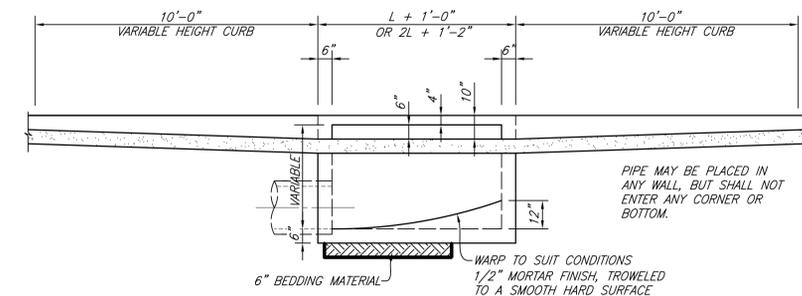
BRIDGE APPROACH SLAB
(APPROACHSLAB)

CITY OF CELINA, TEXAS

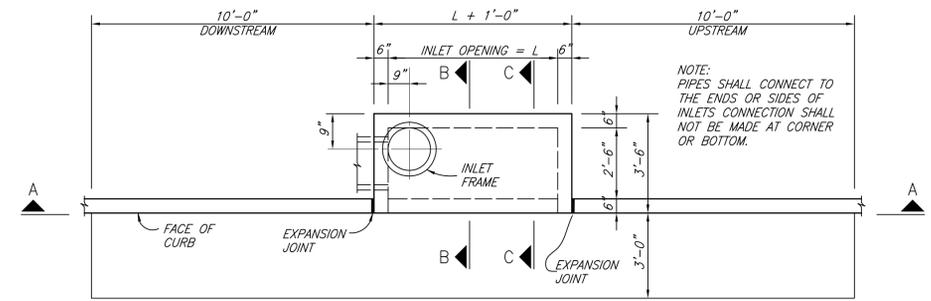
PAVING
STANDARD DETAILS - 27



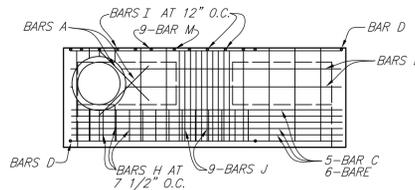
PLAN - RECESSED INLET
(REC-INT1)



SECTION A-A - STANDARD AND RECESSED INLETS
(SECT_A-A1)



PLAN - STANDARD INLET
4, 6, 8 AND 10 FOOT INLETS
(STDINT1)



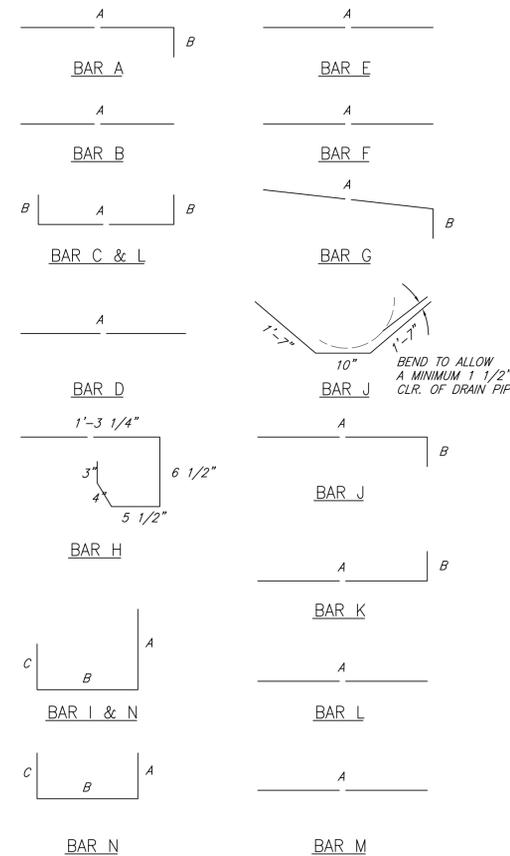
PLAN - STANDARD INLET
(PLAN_STDINTL)

REINFORCING STEEL SCHEDULE

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

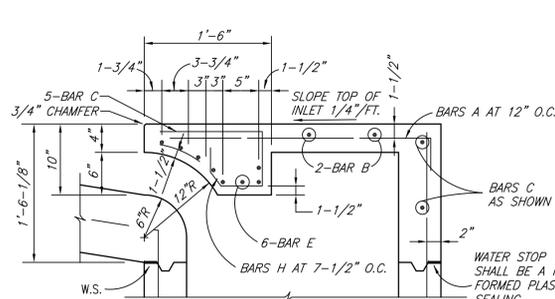
INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS		
				A	B	C
4	A	3	6	3'-2"	0'-3"	-
	B	3	1	2'-10"	-	-
	C	4	15	4'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
6	H	3	6	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
	A	3	9	3'-2"	0'-3"	-
	B	3	1	4'-10"	-	-
	C	4	15	6'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
8	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	9	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
	A	3	12	3'-2"	0'-3"	-
	B	4	1	6'-10"	-	-
10	C	4	15	8'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	12	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
10	A	3	13	3'-2"	0'-3"	-
	B	3	2	8'-10"	-	-
	C	4	16	10'-8"	0'-6"	-
	D	4	4	4'-8"	-	-
	E	5	6	10'-8"	-	-
	G	3	5	2'-0"	1'-3"	-
10	H	3	14	*	*	*
	I	4	8	4'-8"	3'-2"	3'-2"
	L	4	5	4'-3"	-	-

* SEE DIAGRAM FOR DIMENSIONS.
4', 6', 8' AND 10' INLETS

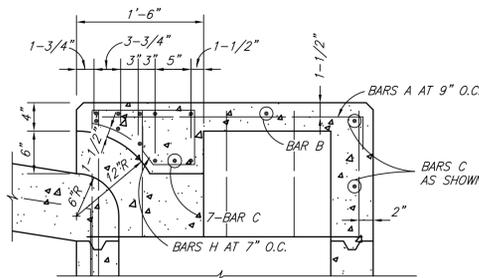


BAR DIAGRAMS
(BARDIAG)

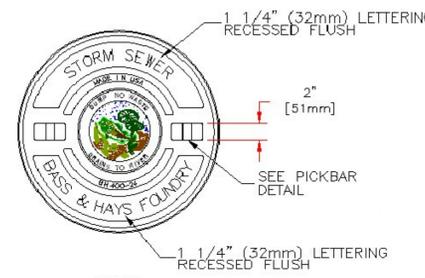
SECTION A-A-RECESSED AND STANDARD INLETS
4, 6, 8, AND 10 FOOT INLETS
(PLAN-10)



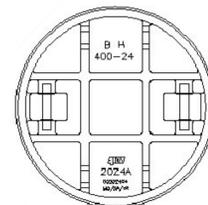
SECTION C-C
(SECT_C-C)



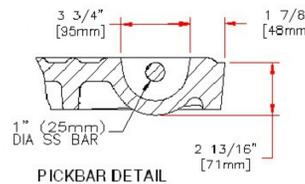
SECTION E-E
(SECT_E-E)



COVER SECTION
MACHINED SURFACE



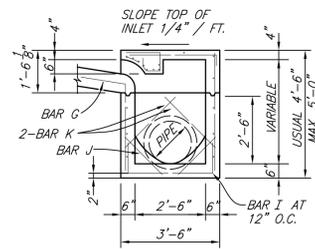
BOTTOM VIEW OF COVER



PICKBAR DETAIL

BH and Bass & Hays are registered trademarks of Bass & Hays Foundry, Inc.

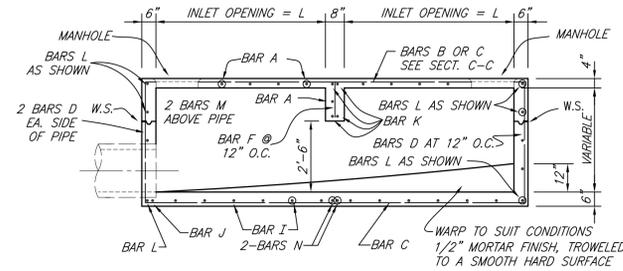
NOTES:
THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.
A MINIMUM OF 6 INCHES OF 1" DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR LIEU OF THIS, AT LEAST 6 INCHES OF 2-SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED-SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.
AFTER CASING HAS BEEN INSTALLED ON THE PROPER BEDDING, THE BACKFILL MATERIAL, WHICH IS FREE FLOWING AND CLEAR OF ROCKS, IN EXCESS OF 4" DIAMETER AND OTHER LUMPS WHICH WOULD PROHIBIT PROPER COMPACTION, SHALL BE COMMENCED IN LIFTS OF NO MORE THAN 18". THE MATERIAL USED FOR BACKFILL SHOULD BE A TYPE SUITABLE TO OBTAIN THE DENSITY REQUIREMENTS FOR THE SPECIFIC JOB.



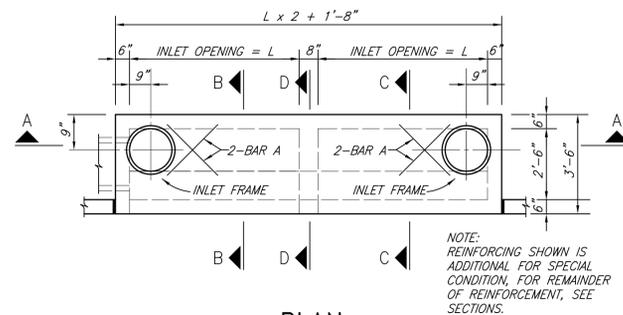
SECTION B-B
(SECT_B-B)

CITY OF CELINA, TEXAS

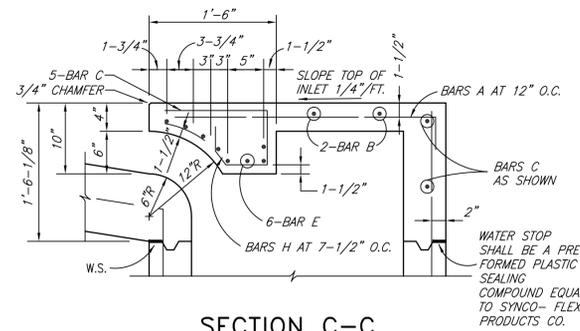
DRAINAGE
STANDARD DETAILS - 28



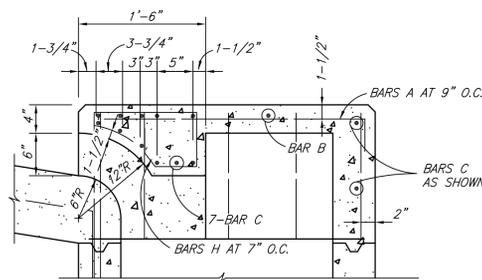
SECTION A-A
12, 14, 16 AND 20 FOOT INLETS
 (SECT_A-A)



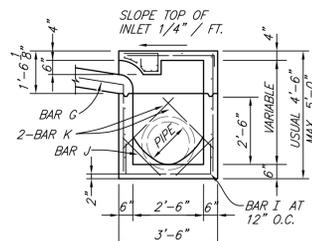
PLAN
20 FOOT INLETS
 (PLAN_20)



SECTION C-C
 (SECT_C-C)



SECTION D-D
 (SECT_D-D)



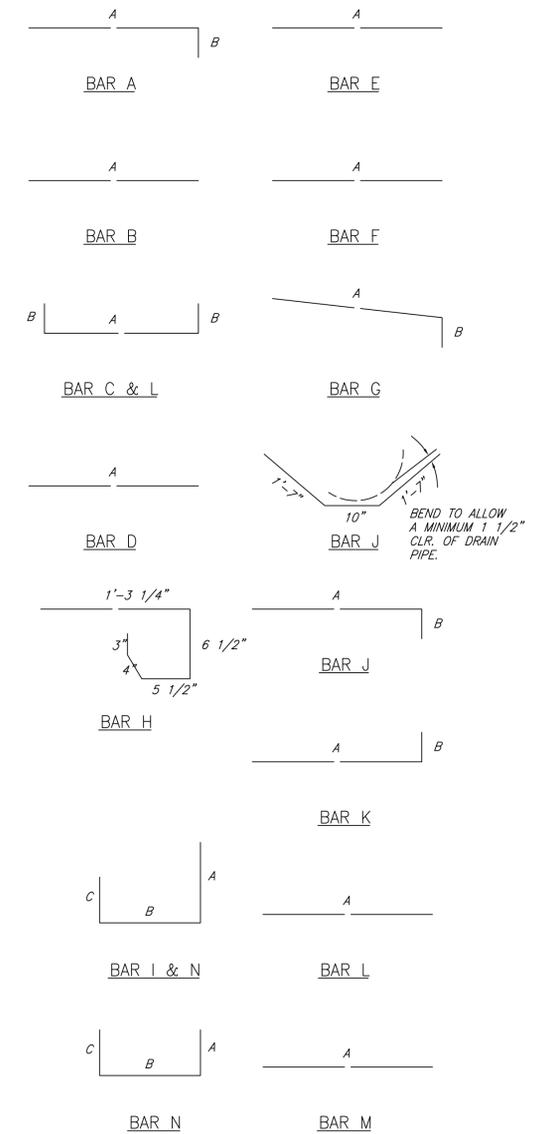
SECTION B-B
 (SECT_B-B)

DOUBLE INLETS
 DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS		
				A	B	C
6 FT.	A	3	15	3'-2"	0'-6"	-
	B	3	2	11'-6"	-	-
	C	4	16	13'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	13'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	12	2'-0"	1'-3"	-
	H	3	26	*	*	*
	I	4	12	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0"	**	-
	N	4	2	4'-8"	3'-2"	4'-8"
7 FT.	A	3	17	3'-2"	0'-6"	-
	B	3	2	13'-6"	-	-
	C	4	16	15'-4"	0'-3'	-
	D	4	9	4'-8"	-	-
	E	5	6	15'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	15	2'-0"	1'-3"	-
	H	3	32	*	*	*
	I	4	14	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0"	**	-
	N	4	2	4'-8"	3'-2"	4'-8"
8 FT.	A	3	19	3'-2"	0'-6"	-
	B	3	2	15'-6"	-	-
	C	4	16	17'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	17'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	12	2'-0"	1'-3"	-
	H	3	26	*	*	*
	I	4	16	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0"	**	-
	N	4	2	4'-8"	3'-2"	4'-8"
10 FT.	A	3	23	3'-2"	0'-6"	-
	B	3	2	19'-6"	-	-
	C	4	16	21'-4"	0'-6"	-
	D	4	9	4'-8"	-	-
	E	5	6	21'-4"	-	-
	F	4	5	1'-2"	-	-
	G	3	15	2'-0"	1'-3"	-
	H	3	32	*	*	*
	I	4	20	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	-
	L	4	11	3'-2"	0'-6"	-
	M	4	2	3'-0"	**	-
	N	4	2	4'-8"	3'-2"	4'-8"

* SEE DIAGRAM FOR DIMENSIONS.
 ** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE 16' AND 20' INLETS

REINFORCING STEEL SCHEDULE



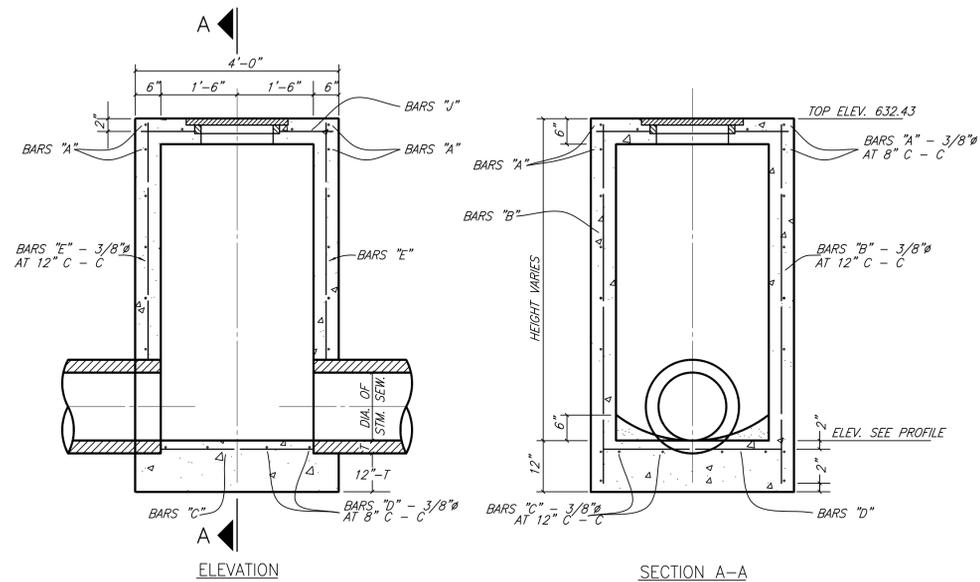
△ BEND TO ALLOW A MINIMUM 1 1/2" CIR. OF DRAIN PIPE
 * SEE DIAGRAMS FOR DIMENSIONS
 ** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE

BAR BENDING DIAGRAMS

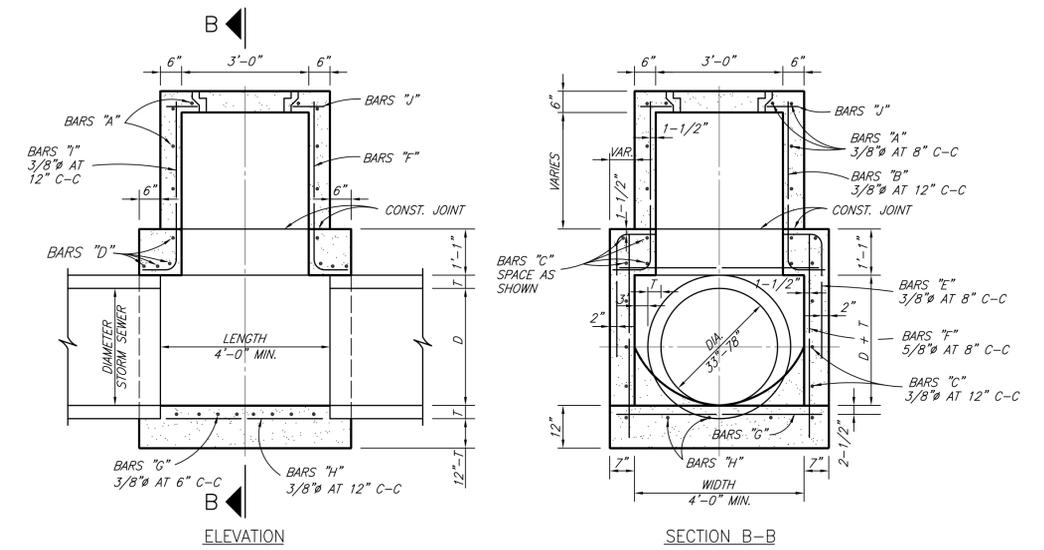
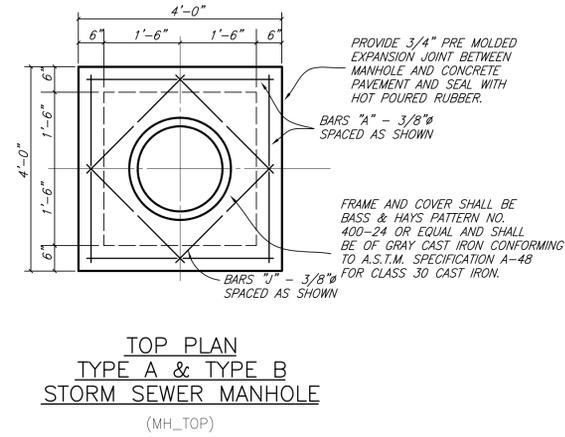
(BARLIST2)

CITY OF CELINA, TEXAS

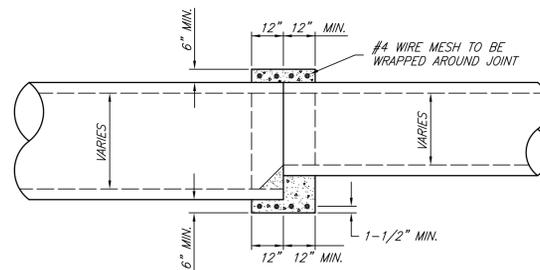
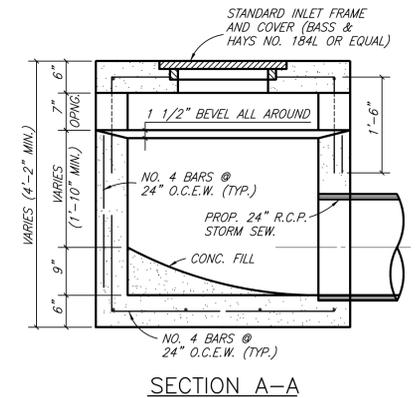
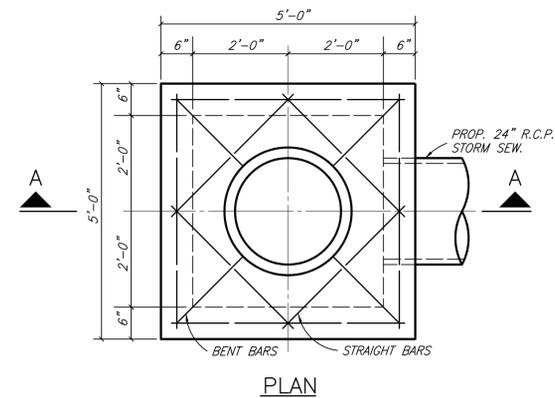
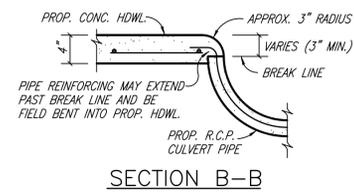
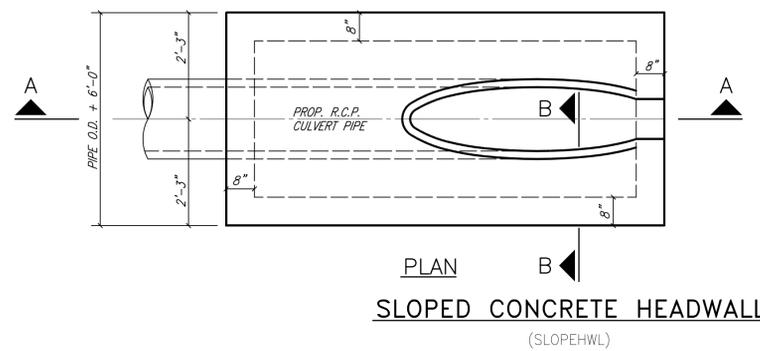
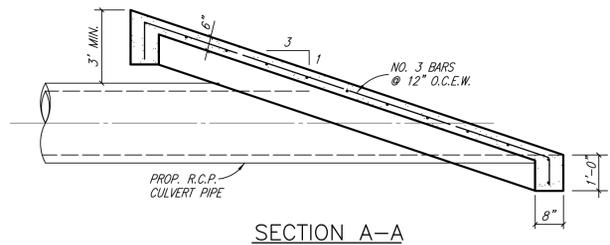
DRAINAGE
 STANDARD DETAILS - 29



STORM SEWER TYPE A MANHOLE
 MAX. PIPE SIZE 30"
 (TYPEAMH)

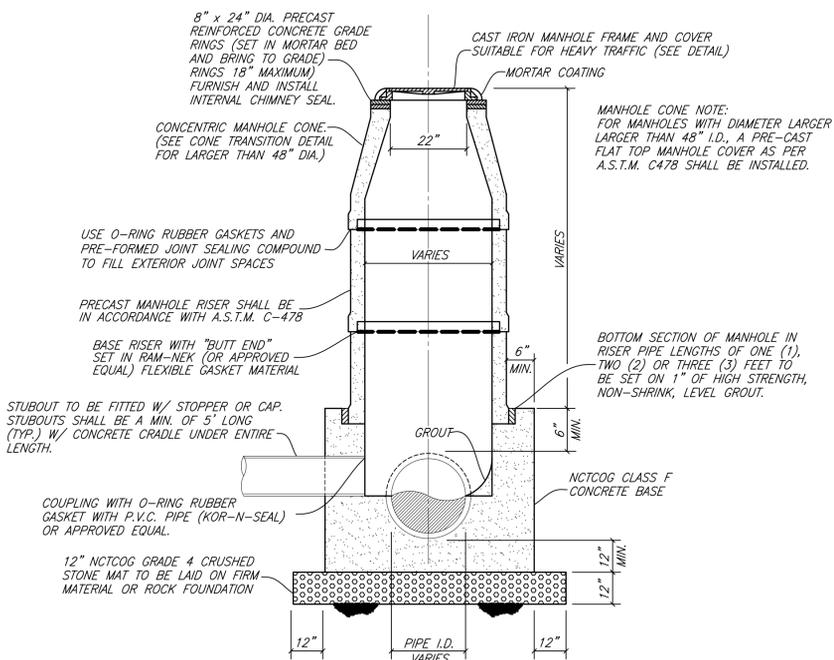


TYPE B STORM SEWER MANHOLE
 MAX. PIPE SIZE 78"
 (TYPEBMH)



CITY OF CELINA, TEXAS

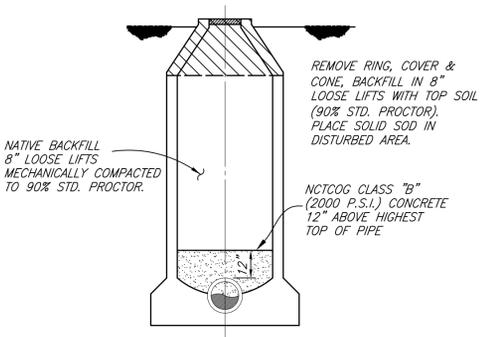
DRAINAGE
 STANDARD DETAILS - 30



PRECAST CONCRETE MANHOLE

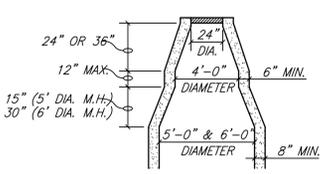
NOTE: ALL JOINTS IN PRECAST MANHOLE SHALL BE SEALED ON OUTSIDE OF MANHOLE WITH AQUAGARD SHRINK SEAL.

(PRECASTMH)



MANHOLE ABANDONMENT

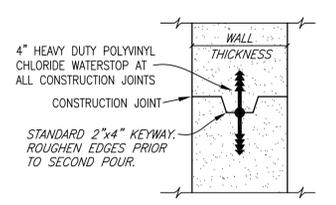
OUTSIDE PAVEMENT AREA (MHABAN)



CONE TRANSITION

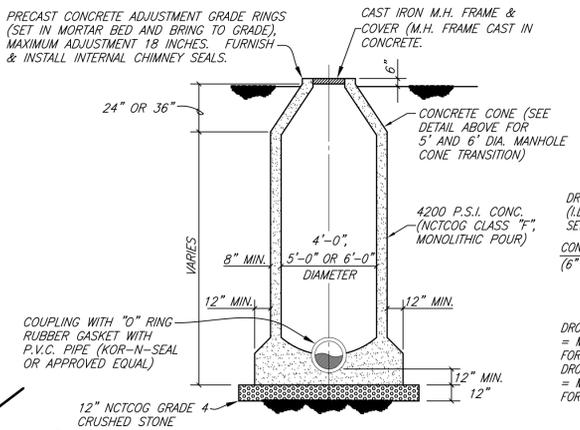
5' & 6' DIAMETER MANHOLES ONLY

MANHOLE CONE NOTE: FOR MANHOLES WITH DIAMETER LARGER THAN 48" I.D., A PRE-CAST FLAT TOP MANHOLE COVER AS PER A.S.T.M. C478 SHALL BE INSTALLED.



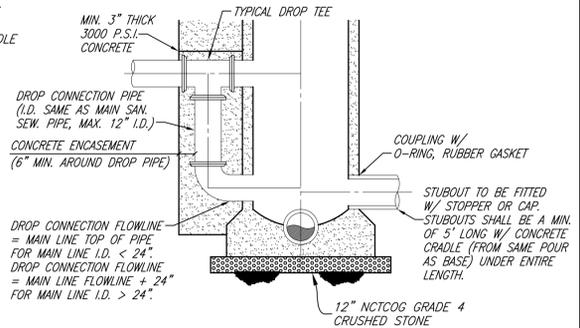
MANHOLE CONSTRUCTION JOINT

KEYWAY WITH WATERSTOP



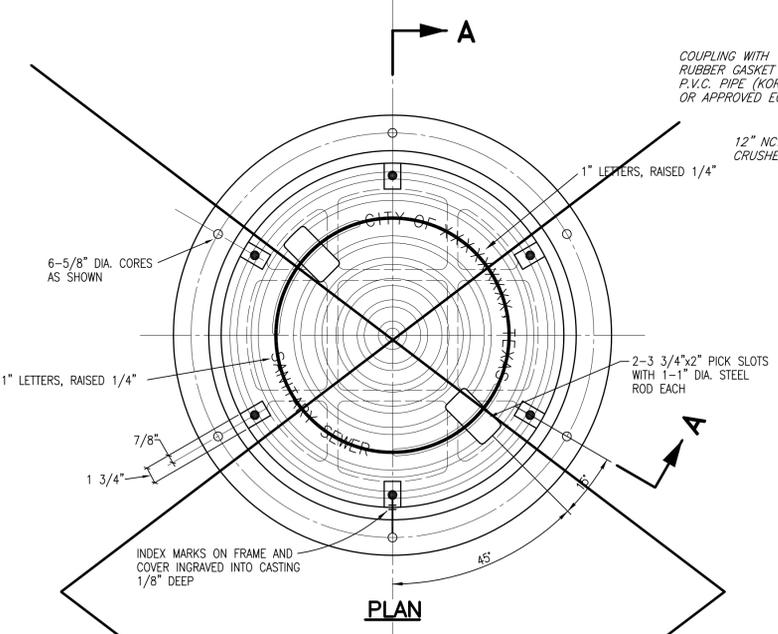
STANDARD MANHOLE ELEVATION

4', 5' & 6' DIAMETER MANHOLES



MANHOLE WITH DROP CONNECTION

5' & 6' DIAMETER MANHOLES (MIN. 5' DIA.)

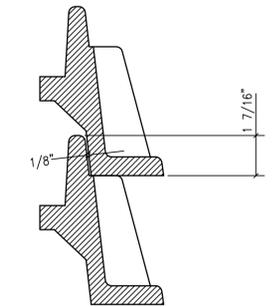


PLAN

SECTION A-A

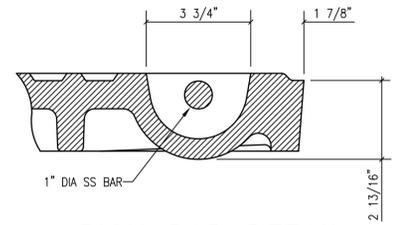
PRESSURE TYPE MANHOLE FRAME AND COVER

(MH-PRES-COV)



STACK DETAIL

(NTS)

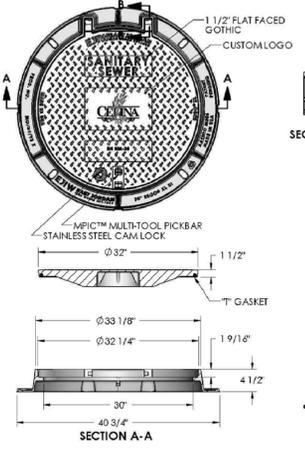


PICK BAR DETAIL

(NTS)

NOTE: CONTRACTOR SHALL USE "EJW" MANHOLE COVER PRODUCT NUMBER 00202429 WITH CITY OF CELINA LOGO OR APPROVED EQUAL.

ERGO XL Assembly



MANHOLE RING AND COVER

WITH LOCKING DEVICE & PICK SLOTS

BASS AND HAYES FOUNDRY, INC.
TRAFFIC BEARING MANHOLES: 400-24
NON TRAFFIC BEARING MANHOLES: 300-24
(MHC0V)

ej

Product Number: NPR12-1895A

Design Features:

- Material: Cover: Ductile Iron (80-55-06); Frame: Ductile Iron (80-55-06)
- Design Load: Heavy Duty
- Open Area: n/a
- Coating: Underside: / Designated Machined Surface
- Slip Resistant Surface: with the LLL® registered trademark

Certification: -ASTM A536; -Country of Origin: USA

Major Components: LC004880X; LF30044079.

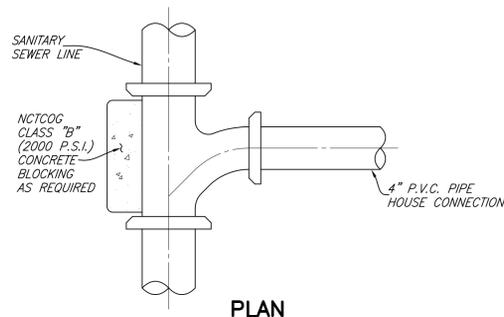
Drawing Revision: 6/18/2012 Designer: SDO; 2/10/2012 Revised By:

Disclaimer: This drawing is the property of EJW, Inc. and embodies confidential information. It is not to be used, copied, or distributed without the written consent of EJW, Inc.

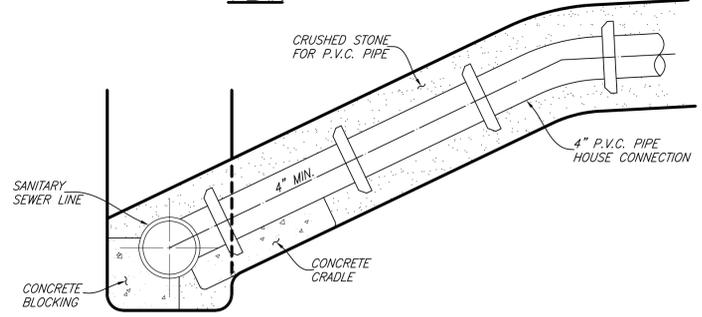
Contact: 800.826.4553; ejw.com

CITY OF CELINA, TEXAS

SANITARY SEWER SYSTEM
STANDARD DETAILS - 31



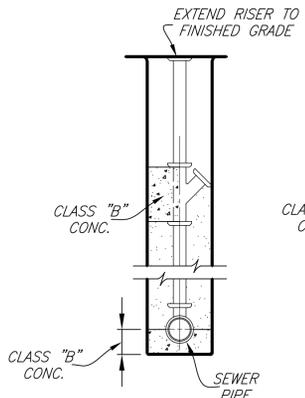
PLAN



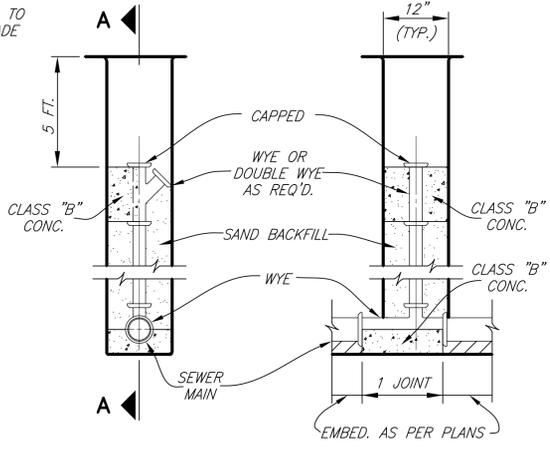
SECTION

TYPICAL SEWER HOUSE SERVICE CONNECTION

SANITARY SEWER CLEANOUT BOOTS SHALL BE BASS & HAYS # 339 OR APPROVED EQUAL. (HOUSE_SERVICE)

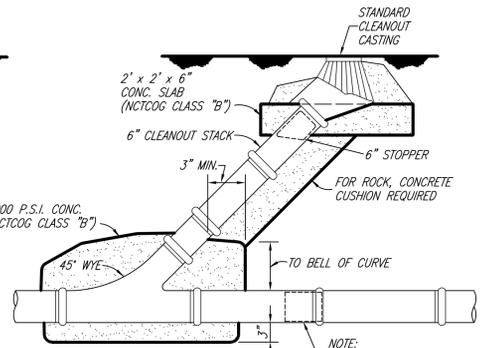
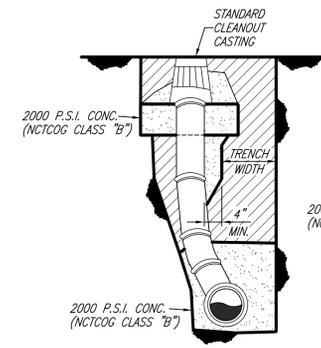


WITH CLEAN OUT



DEEP CUT CLEANOUT

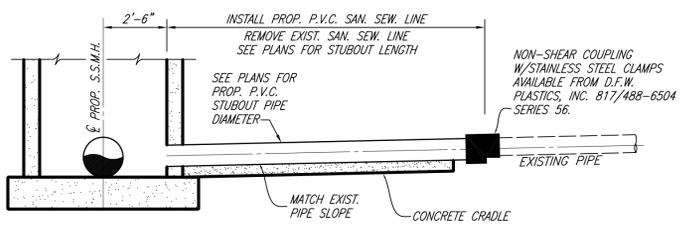
(DEEPCUT-CO)



STANDARD CLEANOUT

NO SCALE (CLEANOUT)

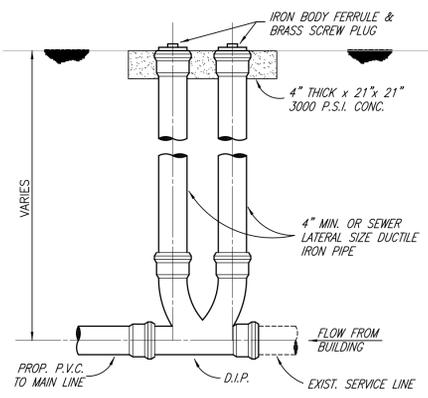
NOTE: WHEN CLEANOUT IS AT THE END OF A LINE, INSTALL A PLUG.



TYPICAL STUBOUT CONNECTION

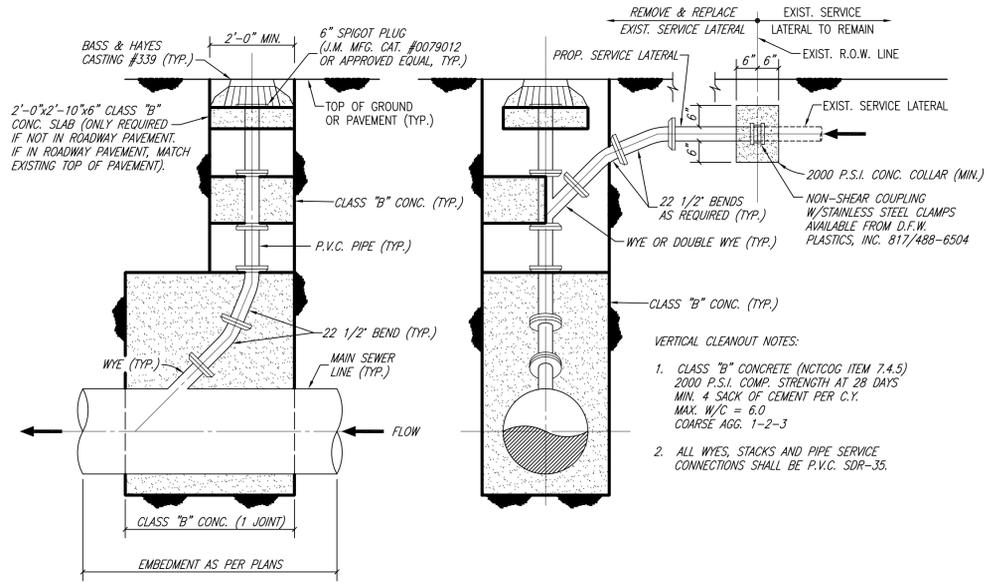
NO SCALE

NOTE: MATCH SOFFITS UPSTREAM OF MANHOLE. MATCH FLOW LINES DOWNSTREAM OF MANHOLE. (STUBOUT)



TYPICAL TWO WAY CLEANOUT

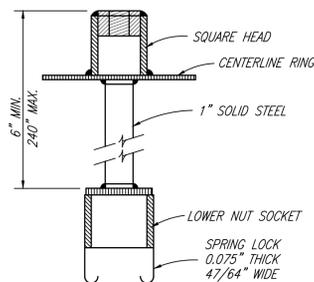
NO SCALE (2-WAY-CO)



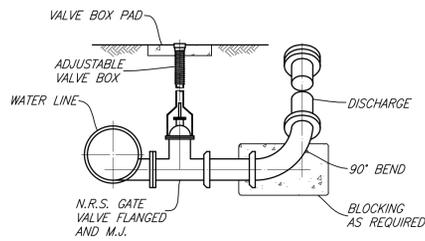
VERTICAL CLEANOUT CONNECTION

(CONNECTION, WYE, CONCRETE, BENDS, CASTING, ETC. ALL SUBSIDIARY TO CLEANOUT) (VERT-CO)

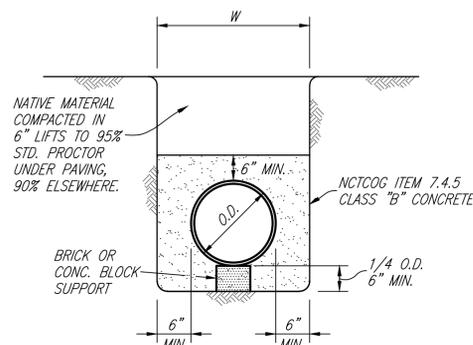
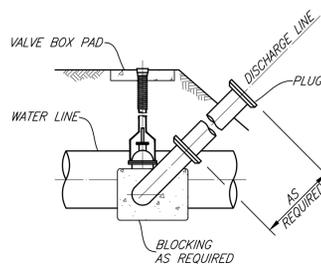
- VERTICAL CLEANOUT NOTES:
- CLASS "B" CONCRETE (NCTCOG ITEM 7.4.5) 2000 P.S.I. COMP. STRENGTH AT 28 DAYS. MIN. 4 SACKS OF CEMENT PER C.Y. MAX. W/C = 6.0. COARSE AGG. 1-2-3
 - ALL WYES, STACKS AND PIPE SERVICE CONNECTIONS SHALL BE P.V.C. SDR-35.



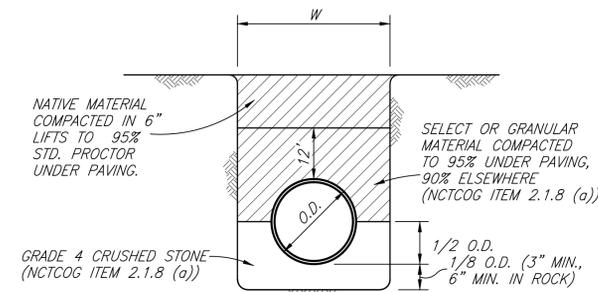
SPRING LOCK VALVE EXTENSION



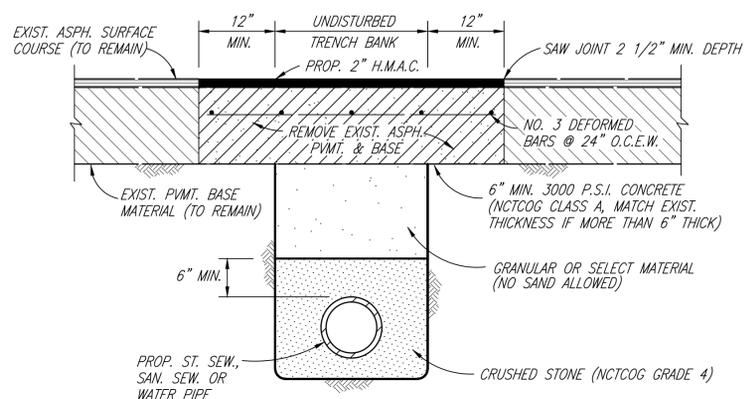
BLOW OFF VALVE



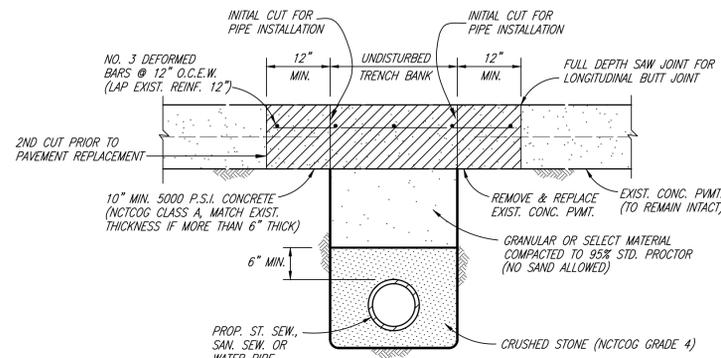
CLASS G EMBEDMENT



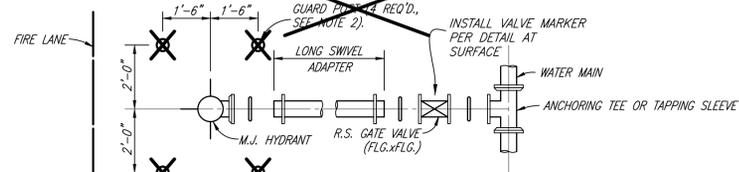
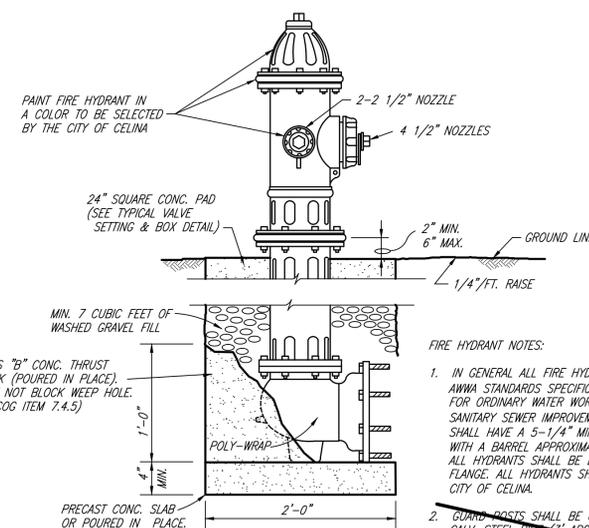
CLASS B+ EMBEDMENT



ASPHALT STREET REPAIR

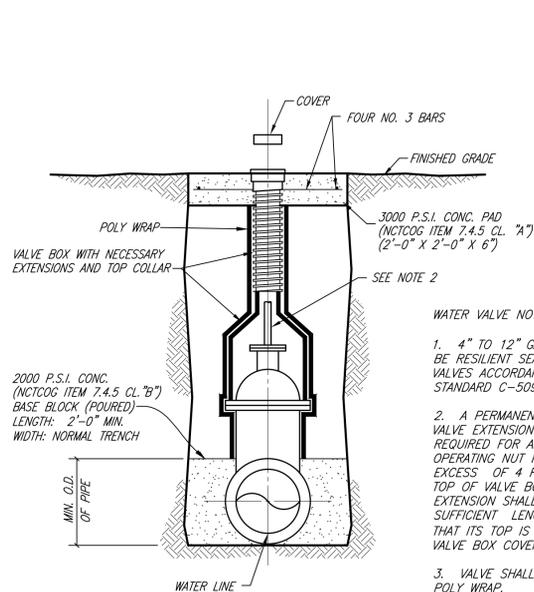


CONCRETE STREET REPAIR

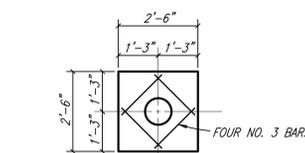


TYPICAL FIRE HYDRANT INSTALLATION

- FIRE HYDRANT NOTES:**
1. IN GENERAL ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARDS SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE FOR WATER AND SANITARY SEWER IMPROVEMENTS. FIRE HYDRANTS SHALL HAVE A 5-1/4" MINIMUM VALVE OPENING AND WITH A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE. ALL HYDRANTS SHALL BE APPROVED BY THE CITY OF CELINA.
 2. GUARD POSTS SHALL BE 6 L.F. OF 6" DIA. HOT DIPPED GALV. STEEL PIPE (24" ABOVE & BELOW GROUND LEVEL). POST SHALL BE ENCASED IN 4" DIA. CONC. PIER TO A DEPTH OF 12" BELOW POST BOTTOM. REINFORCE CONC. PIER WITH 2 NO. 6 BARS (12" LONG) THRU POST INTO PIER.



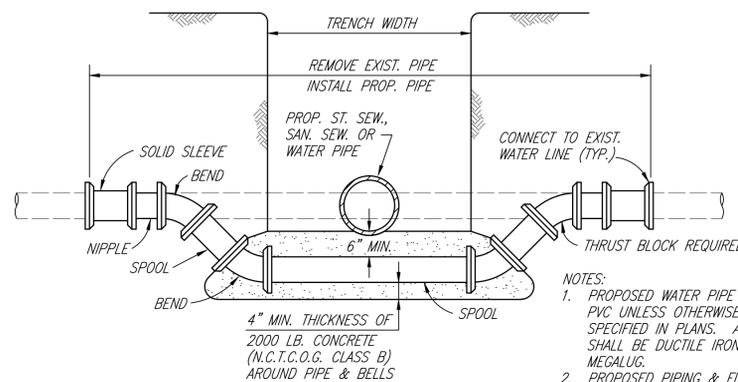
VALVE SETTING & BOX



VALVE BOX PAD PLAN

- WATER VALVE NOTES:**
1. 4" TO 12" GATE VALVE SHALL BE RESILIENT SEATED WEDGE GATE VALVES ACCORDANCE WITH AWWA STANDARD C-509.
 2. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 4 FEET BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT ITS TOP IS WITHIN 4" OF THE VALVE BOX COVER.
 3. VALVE SHALL BE WRAPPED IN POLY WRAP.

VALVE BOX WITH EXTENSION

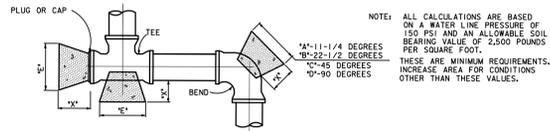


WATER MAIN LOWERING

- NOTES:**
1. PROPOSED WATER PIPE SHALL BE PVC UNLESS OTHERWISE SPECIFIED IN PLANS. ALL FITTINGS SHALL BE DUCTILE IRON (M.J.-P.E.) MEGALUG.
 2. PROPOSED PIPING & FITTINGS ARE SYMMETRIC ABOUT CENTER OF PROP. SAN. SEW. OR ST. SEW. PIPE AND SHALL RETAIN TEST PRESSURES.
 3. ALL THRUST BLOCKING SHALL BE SUBSIDIARY TO UNIT PRICE.
 4. CROSSING OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH T.N.R.C.C. REQUIREMENTS. (CHAPTER 317.13 APPENDIX E)

CITY OF CELINA, TEXAS

WATER DISTRIBUTION SYSTEM
STANDARD DETAILS - 33

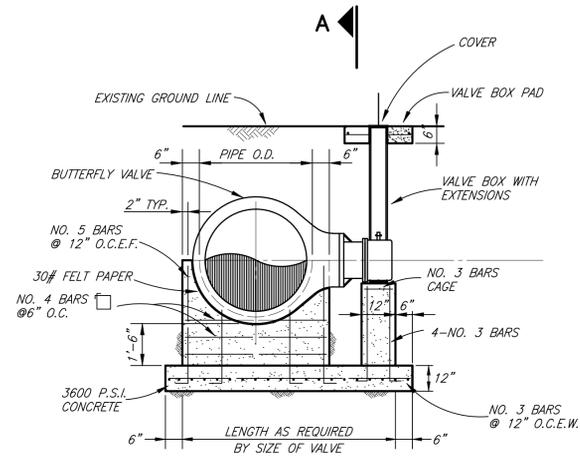


NOTE: ALL CALCULATIONS ARE BASED ON A WATER LINE PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING VALUE OF 2,000 POUNDS PER SQUARE FOOT. THESE ARE MINIMUM REQUIREMENTS. INCREASE AREA FOR CONDITIONS OTHER THAN THESE VALUES.

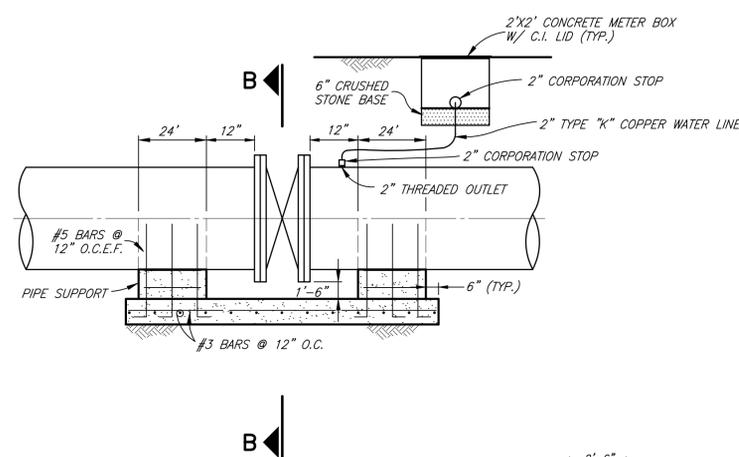
PIPE SIZE	DIM. IN. FT.	11-1/4 DEGREES				22-1/2 DEGREES				45 DEGREES				90 DEGREES				TEE & PLUG	
		"A"	"B"	MIN. AREA	"C"	"A"	"B"	MIN. AREA	"C"	"A"	"B"	MIN. AREA	"C"	"A"	"B"	MIN. AREA	"C"	MIN. AREA	
4"	1.5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
6"	1.5	1.00	1.00	1.00	1.00	1.14	1.30	1.55	2.40	1.30	1.55	2.40	1.30	1.55	2.40	1.30	1.70	1.70	
8"	1.5	1.00	1.00	1.00	1.00	1.18	1.52	2.31	2.07	4.27	1.74	3.02	1.74	3.02	1.74	3.02	1.74	3.02	
10"	1.5	1.00	1.00	1.00	1.35	1.84	1.90	3.61	2.58	6.66	2.17	4.71	2.17	4.71	2.17	4.71	2.17	4.71	
12"	1.5	1.00	1.33	1.63	2.65	1.86	5.19	3.10	9.60	2.61	6.79	2.61	6.79	2.61	6.79	2.61	6.79	6.79	
14"	1.5	1.03	1.81	1.90	3.60	2.66	7.07	3.61	13.06	3.04	9.24	3.04	9.24	3.04	9.24	3.04	9.24	9.24	
16"	2.0	1.18	2.36	2.17	4.71	3.04	9.23	4.13	17.06	3.47	12.06	3.47	12.06	3.47	12.06	3.47	12.06	12.06	
18"	2.0	1.33	2.99	2.44	5.96	3.42	11.69	4.65	21.59	3.91	15.27	3.91	15.27	3.91	15.27	3.91	15.27	15.27	
20"	2.0	1.48	3.70	2.71	7.35	3.80	14.43	5.16	26.66	4.34	18.85	4.34	18.85	4.34	18.85	4.34	18.85	18.85	
21"	2.0	1.55	4.07	2.85	8.11	3.99	15.91	5.42	29.39	4.56	20.78	4.56	20.78	4.56	20.78	4.56	20.78	20.78	
24"	2.0	1.71	5.32	3.25	10.59	4.66	20.77	6.20	38.39	5.21	27.14	5.21	27.14	5.21	27.14	5.21	27.14	27.14	
27"	2.5	1.59	6.73	3.66	13.40	5.13	26.29	6.97	48.58	5.86	34.35	5.86	34.35	5.86	34.35	5.86	34.35	34.35	
30"	2.5	2.22	8.51	4.07	16.55	5.70	32.46	7.74	59.98	6.51	42.41	6.51	42.41	6.51	42.41	6.51	42.41	42.41	
33"	2.5	2.44	10.06	4.47	20.02	6.27	39.28	8.52	72.57	7.16	51.31	7.16	51.31	7.16	51.31	7.16	51.31	51.31	
36"	2.5	2.66	11.97	4.88	23.83	6.84	46.14	9.29	86.37	7.81	61.07	7.81	61.07	7.81	61.07	7.81	61.07	61.07	
39"	3.0	2.88	14.05	5.29	27.97	7.41	54.86	10.07	101.26	8.47	71.68	8.47	71.68	8.47	71.68	8.47	71.68	71.68	
42"	3.0	3.10	16.30	5.69	32.43	7.98	63.62	10.85	117.56	9.12	83.13	9.12	83.13	9.12	83.13	9.12	83.13	83.13	

NOTE: CLASS "B" CONCRETE 2,000 PSI SHALL BE USED FOR ALL BLOCKING UNLESS OTHERWISE NOTED ON STANDARD DETAILS AND/OR PLANS. THE MINIMUM VERTICAL DIMENSION OF ALL BLOCKING SHALL BE 1.5 TIMES THE PIPE DIAMETER WITH AT LEAST 0.15 TIMES THE PIPE DIAMETER EXTENDING BOTH ABOVE AND BELOW THE PIPE CENTERLINE. THIS DIMENSION DETERMINES THE "A" DIMENSION FOR 11-1/4° BENDS. FOR 22-1/2°, 45°, 90° AND TEES AND PLUGS, THE VERTICAL DIMENSION SHALL BE EQUAL TO THE HORIZONTAL DIMENSION SHOWN TO PRODUCE THE REQUIRED MINIMUM AREA. ALL MINIMUM AREAS ARE IN SQUARE FEET. BLOCKING TO BE AGAINST UNDISTURBED TRENCH WALLS AND BOTTOM.

HORIZONTAL THRUST BLOCKING DETAIL
NO SCALE



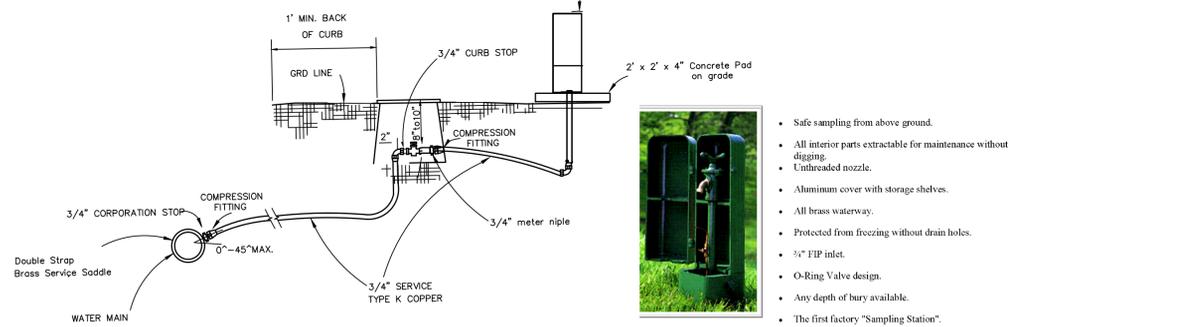
BUTTERFLY VALVE INSTALLATION



ENCASED ROAD OR RAILROAD BORE

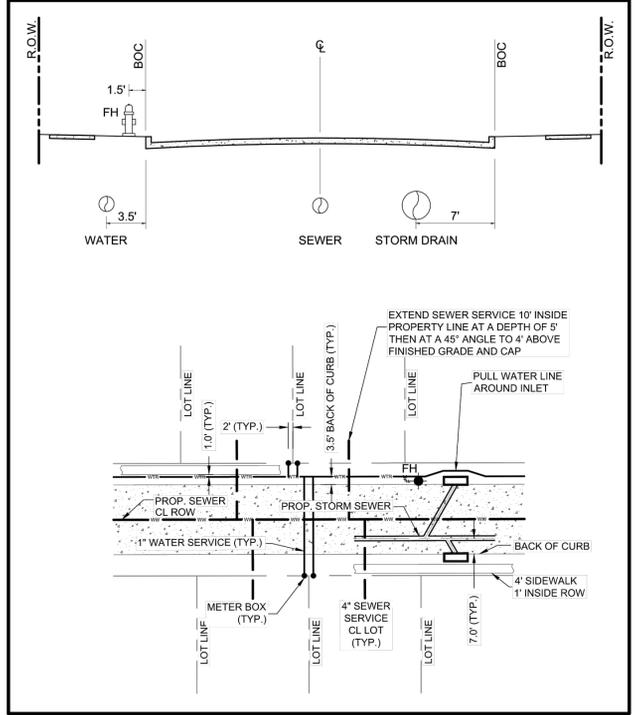
- BORING NOTES:**
- 2" MORTAR BANDS FOR R.C.C.P. AND CEMENT LINED & COATED STEEL PIPE MAY BE USED IN LIEU OF SKIDS & STRAPS.
 - CONTRACTOR SHALL PROVIDE SUPPORT UNDER CARRIER PIPE TO HAVE MIN. 1" CLEARANCE BETWEEN PIPE BELL AND ENCASEMENT PIPE.
 - ENDS OF ENCASEMENT PIPE SHALL BE PLUGGED WITH BRICK AND MORTAR FOR ROADWAY CROSSINGS AND CLAY FOR RAILROAD CROSSINGS.

Sampling Station Eclipse No 88

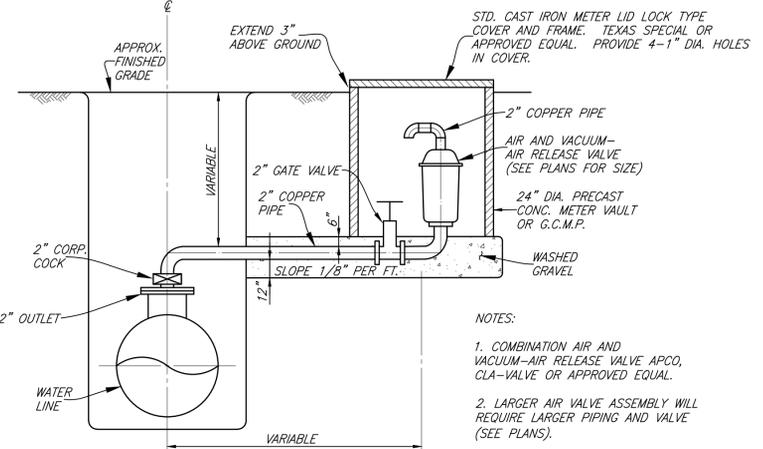


- Safe sampling from above ground.
- All interior parts extractable for maintenance without digging.
- Unthreaded nozzle.
- Aluminum cover with storage shelves.
- All brass waterway.
- Protected from freezing without drain holes.
- 3/4" FIP inlet.
- O-Ring Valve design.
- Any depth of bury available.
- The first factory "Sampling Station".
- Optional Attached Pump.

SERVICE CONNECTION DETAIL (LOTS 10,000 S.F. OR LARGER)
NO SCALE



UTILITY PLACEMENT DETAIL
NO SCALE



AIR AND VACUUM - AIR RELEASE VALVE INSTALLATION

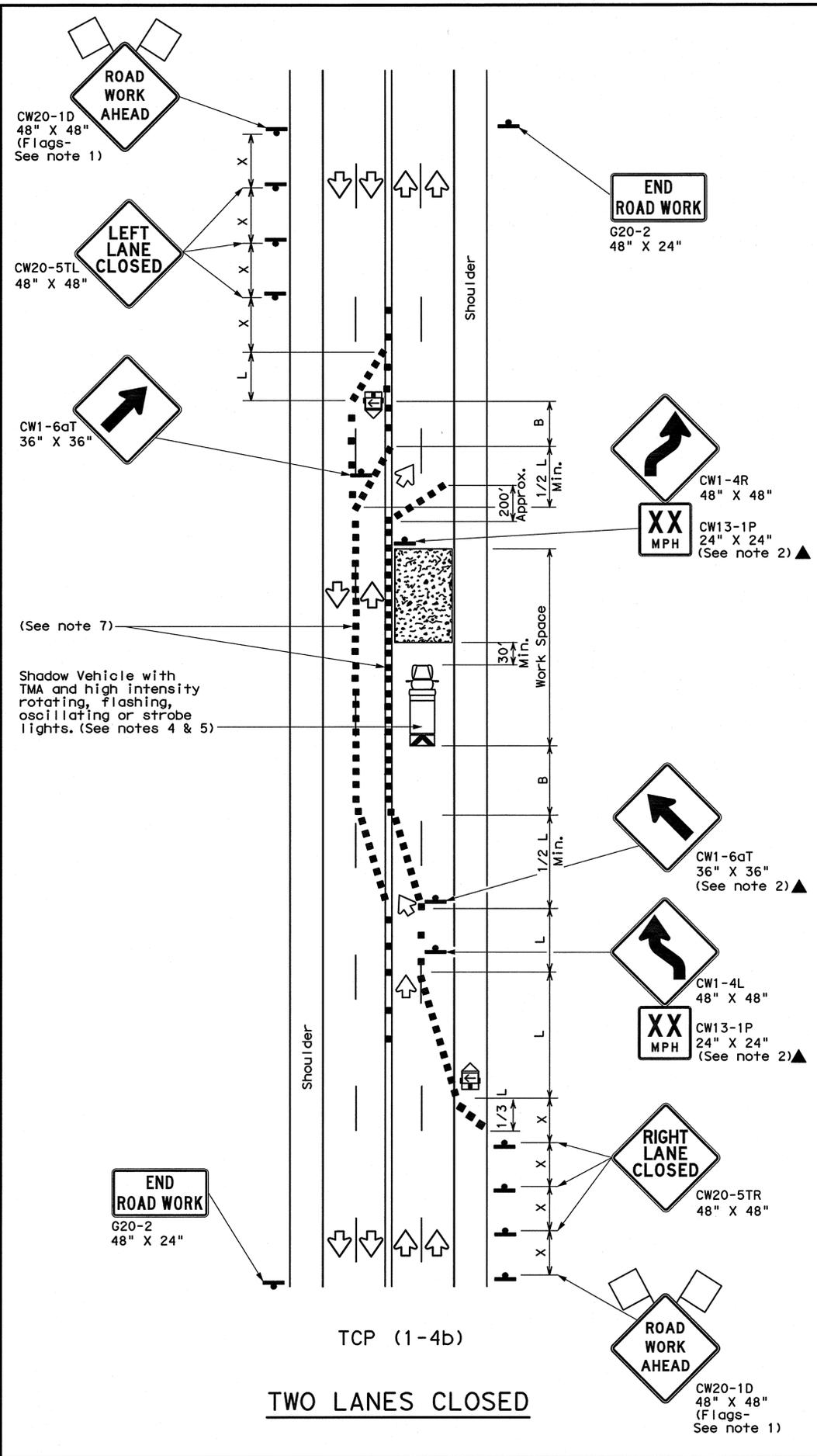
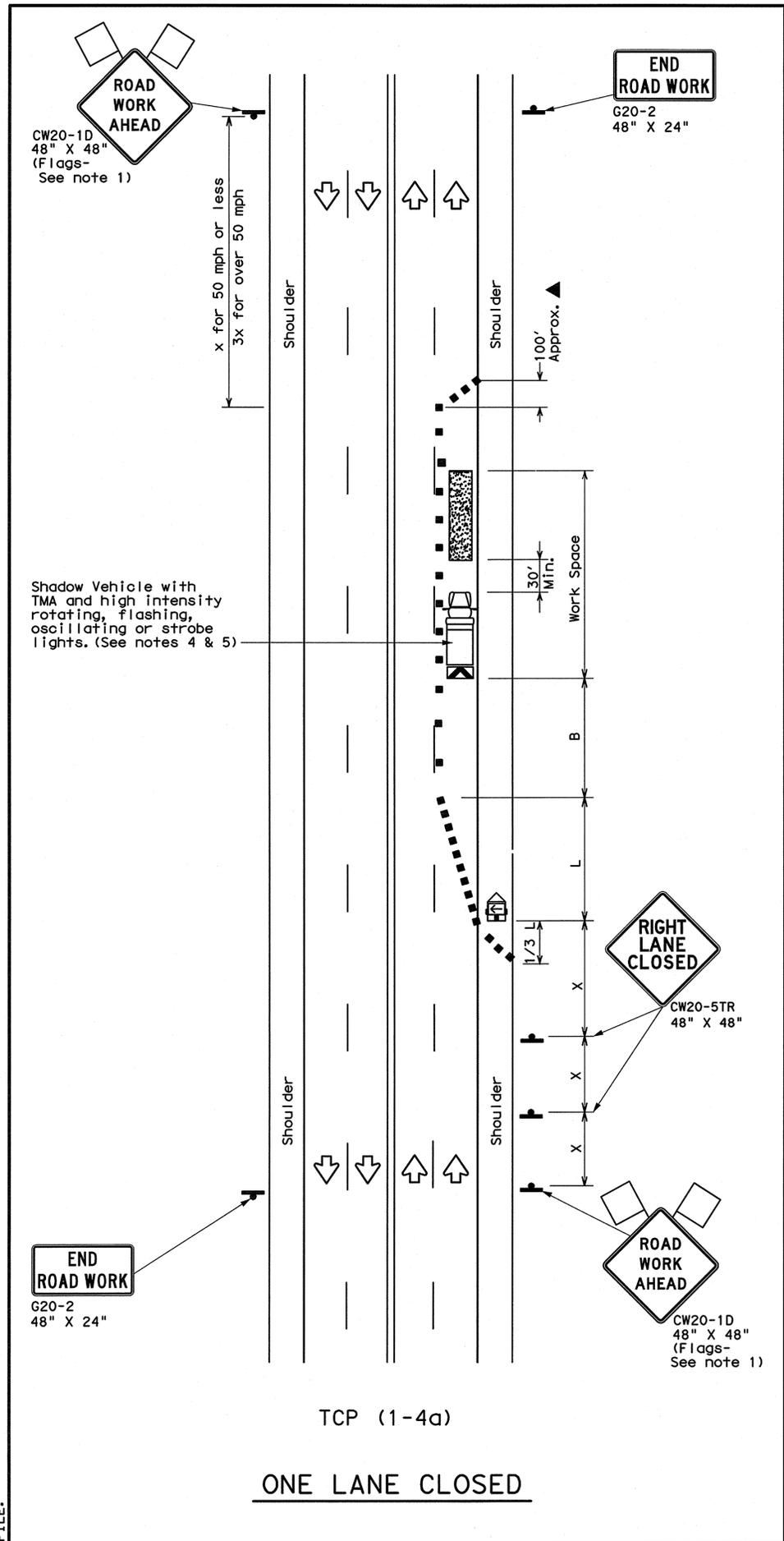
- NOTES:**
1. COMBINATION AIR AND VACUUM-AIR RELEASE VALVE APCCO, CLA-VALVE OR APPROVED EQUAL.
 2. LARGER AIR VALVE ASSEMBLY WILL REQUIRE LARGER PIPING AND VALVE (SEE PLANS).

CITY OF CELINA, TEXAS

WATER DISTRIBUTION SYSTEM
STANDARD DETAILS - 34

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DATE: FILE:



LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed * X	Formula	Minimum Desirable Taper Lengths *X			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	$L = WS$	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
 * Taper lengths have been rounded off.
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

- GENERAL NOTES**
- Flags attached to signs where shown are REQUIRED.
 - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
 - The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
 - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
 - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-4a)

- If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

TCP (1-4b)

- Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC CONTROL PLAN
LANE CLOSURES ON MULTILANE
CONVENTIONAL ROADS

TCP (1-4)-12

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REVISIONS					
2-94	2-12	CONT	SECT	JOB	HIGHWAY
8-95					
1-97		DIST	COUNTY		SHEET NO.
4-98					
154					

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TYPE III BARRICADES

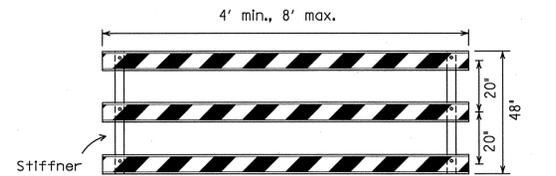
1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type III Barricades and a list of all materials used in the construction of Type III Barricades.
2. Type III Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.

TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



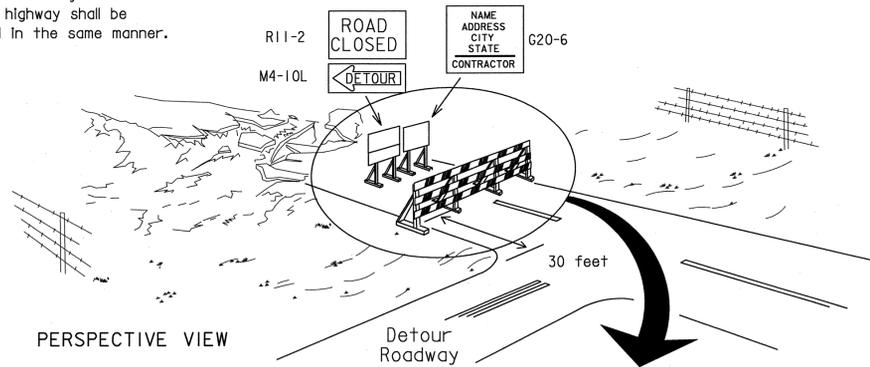
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

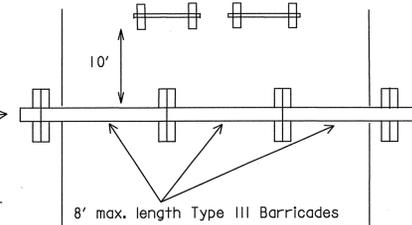
TYPE III BARRICADE (POST AND SKID) TYPICAL APPLICATION

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

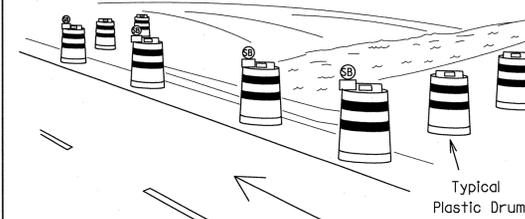
The three rails on Type III barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic. Barricade striping should slant downward in the direction of detour.



PLAN VIEW

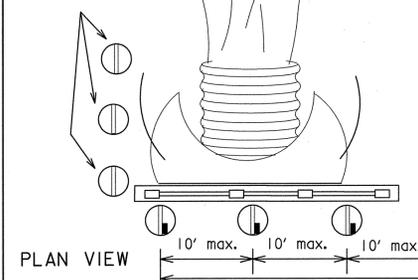
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type III Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



PERSPECTIVE VIEW

These drums are not required on one-way roadway



PLAN VIEW

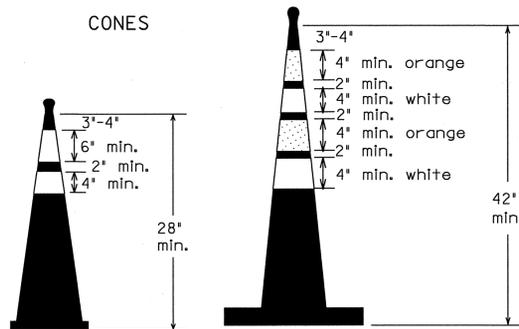
1. Where positive redirection capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.

Increase number of plastic drums on the side of approaching traffic if the crown width makes it necessary. (minimum of 2 and maximum of 4 drums)

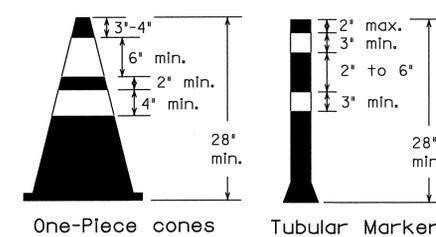
Legend

- Plastic drum
- Plastic drum with steady burn light or yellow warning reflector
- SB Steady burn warning light or yellow warning reflector

CONES



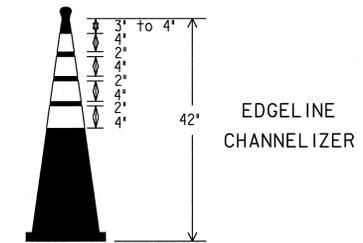
Two-Piece cones



One-Piece cones Tubular Marker

28" Cones shall have a minimum weight of 9 1/2 lbs.

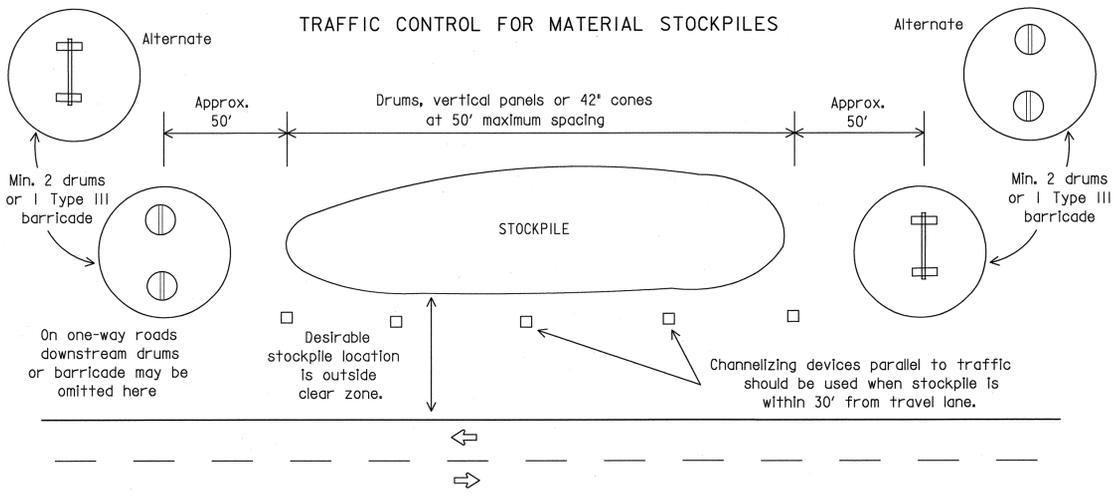
42" 2-piece cones shall have a minimum weight of 30 lbs. including base.



EDGE LINE CHANNELIZER

1. This device is intended only for use in place of a vertical panel to channelize traffic by indicating the edge of the travel lane. It is not intended to be used in transitions or tapers.
2. This device shall not be used to separate lanes of traffic (opposing or otherwise) or warn of objects.
3. This device is based on a 42 inch, two-piece cone with an alternate striping pattern: four 4 inch retroreflective bands, with an approximate 2 inch gap between bands. The color of the band should correspond to the color of the edgeline (yellow for left edgeline, white for right edgeline) for which the device is substituted or for which it supplements. The reflectorized bands shall be retroreflective Type C encapsulated bead (High Specific Intensity) conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
4. The base must weigh a minimum of 30 lbs.

TRAFFIC CONTROL FOR MATERIAL STOCKPILES



1. Traffic cones and tubular markers shall be a minimum of 28 inches in height when used either on freeways or at nighttime.
2. Cones or tubular markers shall be predominantly orange, fluorescent red-orange, or fluorescent yellow-orange. They should be kept clean and bright for maximum visibility.
3. Cones used only for daytime operations do not require the reflectorized bands.
4. Cones and tubular markers used for nighttime operations shall be reflectorized. Reflectorized material shall have a smooth, sealed outer surface that displays the same approximate color during the day and night. The reflectorized bands shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
5. When used at night, appropriate personnel shall ensure that cones and tubular markers remain in their proper location and in an upright position.
6. Reflectorization of 28" cones shall consist of a minimum 6 inch band placed at least 3 inches but not more than 4 inches from the top, supplemented by a minimum 4 inch band spaced a minimum of 2 inches below the 6 inch band.
7. Reflectorization of 42" cones shall be provided by alternating 4 to 6" orange and white stripes with orange on top.
8. Reflectorization of tubular markers shall be a minimum of two 3 inch bands placed a maximum of 2 inches from the top with a maximum of 6 inches between bands.
9. One-piece cones or tubular markers are generally suitable for temporary usage (up to 8 hours) with other channelization devices such as vertical panels, drums or two-piece cones for long term usage. Care should be taken to ensure they remain in their proper location and in an upright position.
10. Cones or tubular markers used on each project shall be of the same size and shape.
11. The handle may be designed as a hook or other shape, fabricated from non-rigid materials similar to the cone material, and may extend up to a maximum of 8 inches above the top of the cone. Length of the handle shall not be considered with regard to the overall height of the cone.

Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES STANDARD

10 of 12

BC(10)-07

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9-07	REVISIONS	CONT	SECT	JOB
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