

NOTE: GRANULAR BACKFILL SHALL BE PROVIDED WITHIN THE DISTURBED AREAS BELOW THE PIPE AT EX MH-1.

**Sigmund Place Sanitary Sewer Profile**

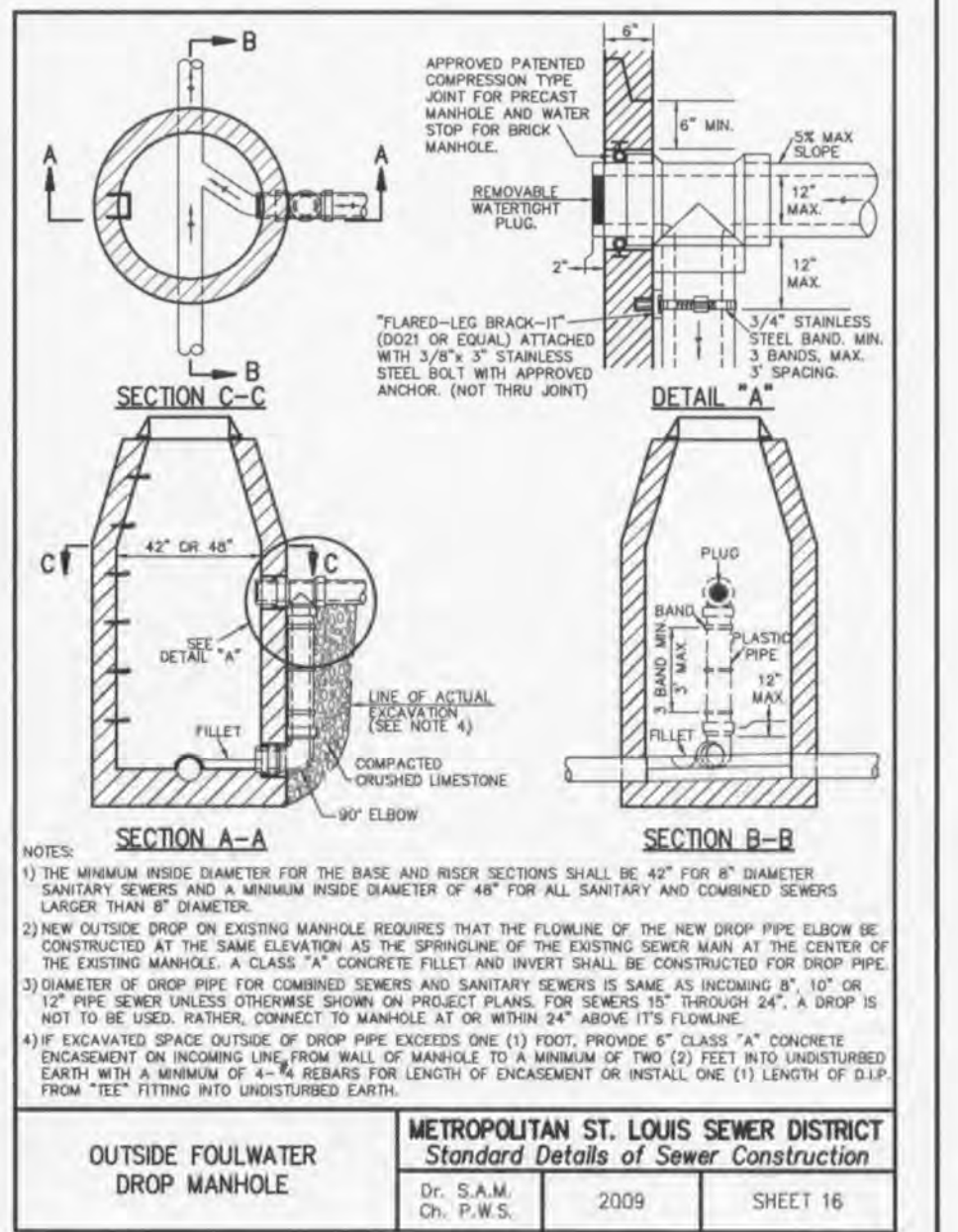
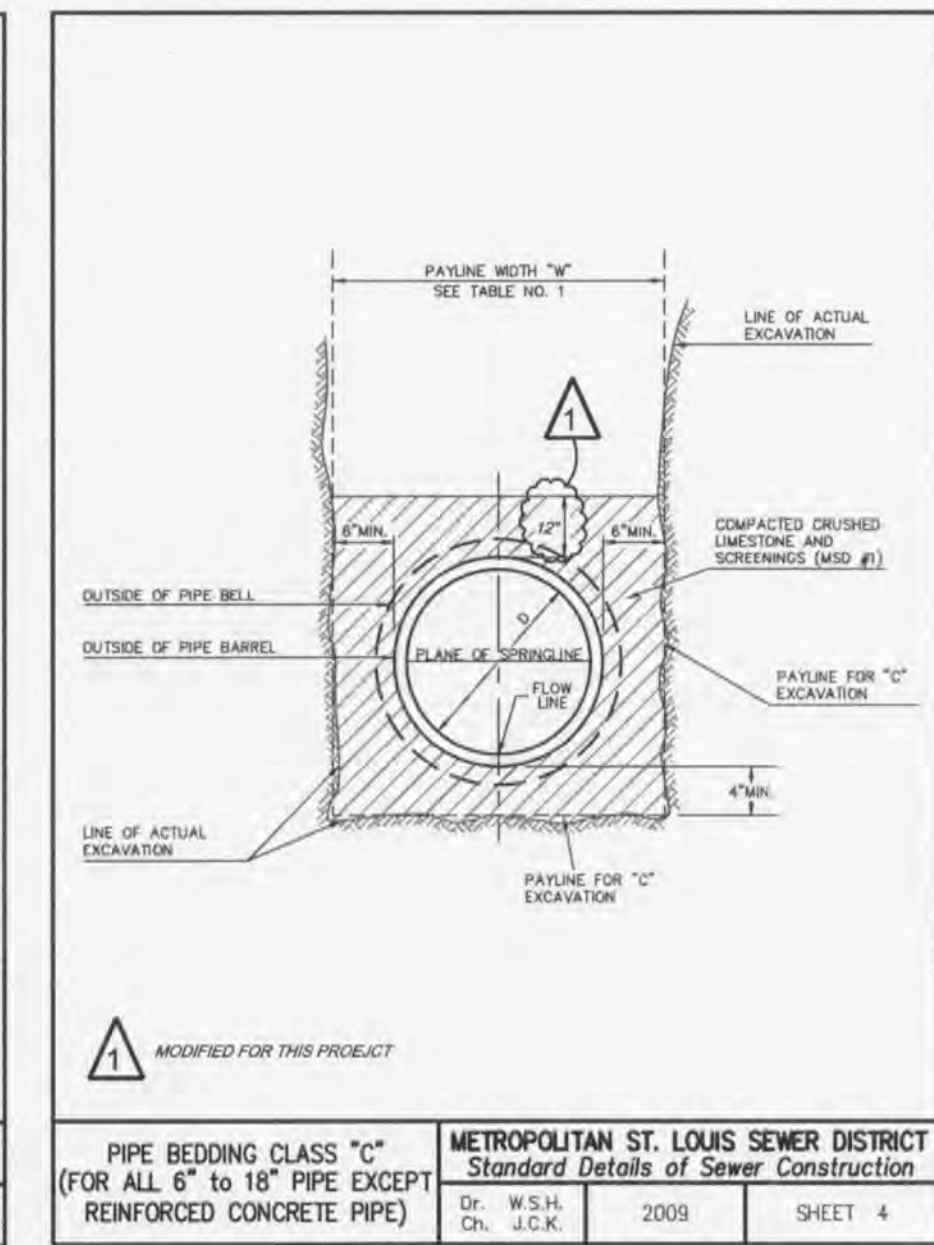
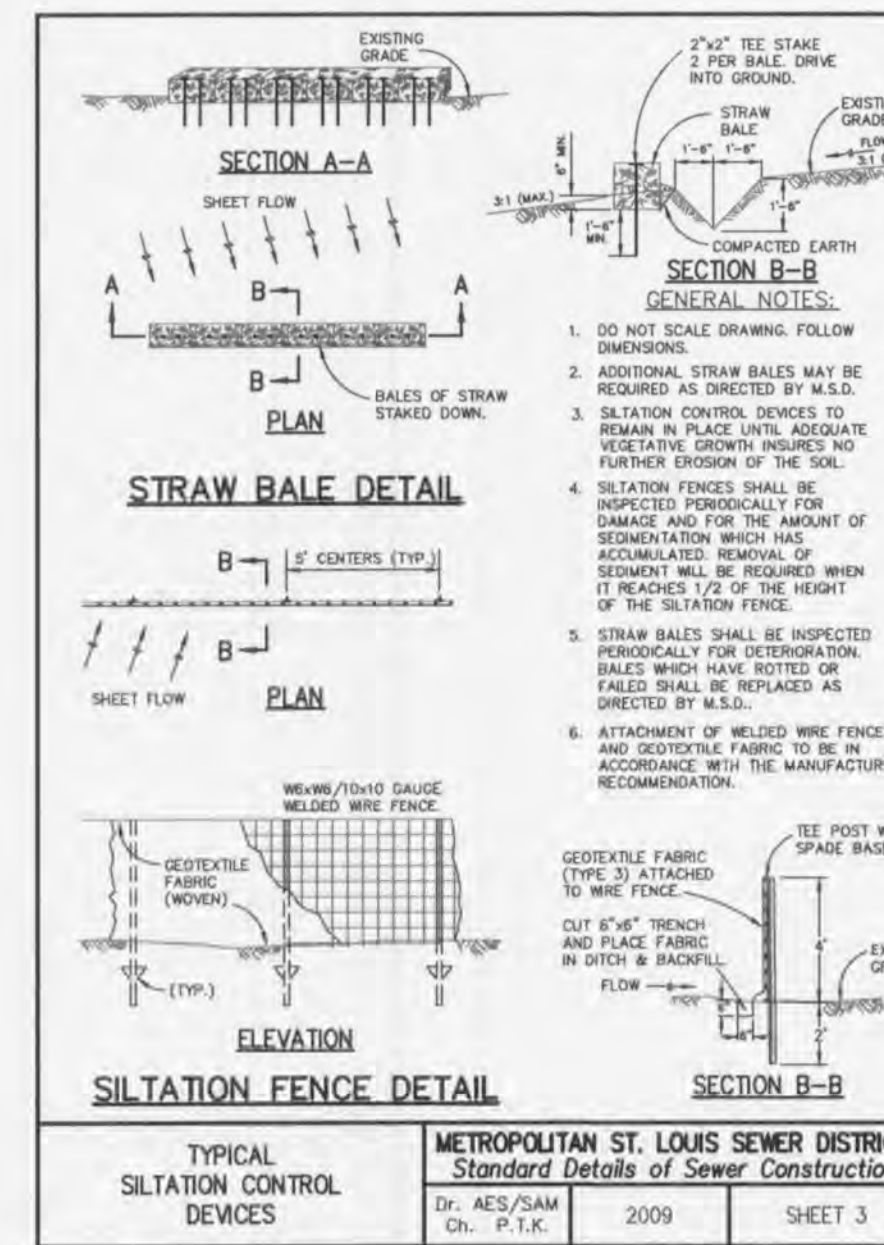
Scale: H. 1" = 50'  
V. 1" = 10'

**SANITARY SEWER NOTES**

- SAN #1 ALL SANITARY SEWER INSTALLATION IS TO BE IN ACCORDANCE WITH THE METROPOLITAN ST. LOUIS SEWER DISTRICTS (MSD) STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES, 2009, EXCEPT AS MODIFIED BY THE CITY OF FALLON.
- SAN #2 BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF SANITARY SEWER STRUCTURES. PRE CAST STRUCTURES ARE TO BE USED UNLESS OTHERWISE APPROVED BY THE CITY OF FALLON.
- SAN #3 CONNECTION AT ALL SANITARY STRUCTURES ARE TO BE MADE WITH A-LOCK JOINT OR EQUAL.
- SAN #4 ALL SANITARY LATERALS BE A MINIMUM OF 4" RESIDENTIAL, 6" COMMERCIAL DIAMETER PIPE.
- SAN #5 ALL SANITARY MAINS ARE TO BE A MINIMUM OF 8" DIAMETER PIPE.
- SAN #6 ALL SANITARY SEWER LINE WITH A SLOPE GREATER THAN 20% WILL REQUIRE CONCRETE CRADLE OR CONCRETE COLLAR. SANITARY LINE WITH A SLOPE GREATER THAN 50% WILL REQUIRE A SPECIAL APPROVED DESIGN AS SHOWN ON DETAIL SHEET.
- SAN #7 ALL MANHOLES BUILT WITHIN 100 YEAR FLOOD PLAIN MUST HAVE LOCK TYPE WATERTIGHT MANHOLE COVERS.
- SAN #8 ALL SANITARY SEWER MAINS MUST HAVE A MINIMUM OF 42" COVER.
- SAN #9 WHEN SANITARY MAINS CROSS OVER STORM LINE THE MAIN MUST BE DUCTILE IRON PIPE FOR 10 FEET ON EACH SIDE OF THE CROSSING.
- SAN #10 ENCASE WITH CONCRETE BOTH THE SANITARY AND STORM SEWER AT CROSSING WHEN STORM SEWER IS WITHIN 18 INCHES ABOVE SANITARY SEWER. ADD CONCRETE CRADLE TO ONLY RCP STORM SEWER AND ENCASE HDPE STORM SEWER WHEN IT IS MORE THAN 18 INCHES ABOVE SANITARY LINE. SHOW ON PROFILE SHEET.
- SAN #11 THE SANITARY SEWERS SHOULD RUN DIAGONALLY THROUGH SIDE YARDS TO MINIMIZE ANY ADDITIONAL UTILITY EASEMENTS REQUIRED.
- SAN #12 ALL SANITARY SEWER STRUCTURES SHALL BE ON THE EXTERIOR IN ACCORDANCE TO MISSOURI DNR SPECIFICATIONS 10CSR-8.120 (7)(E).
- SAN #13 ALL SANITARY SEWER PIPE SHALL BE SDR35 OR EQUAL.
- SAN #14 ALL SANITARY SEWER MANHOLES AND PIPES WILL BE TESTED TO FOLLOWING SPECIFICATIONS. ASTM C1244. STANDARD TESTING METHOD FOR CONCRETE SEWER MANHOLE BY NEGATIVE AIR PRESSURE (VACUUM). LATEST REVISION ASTM F417. STANDARD TESTING METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW PRESSURE AIR. LATEST REVISION.
- SAN #15 ADD 1" MINUS ROCK BACK FILL TO ALL SANITARY SEWER AND ALL OTHER UTILITIES THAT LIE WITHIN THE 1:1 SHEAR PLANE OF THE ROAD.
- SAN #16 CONNECTIONS TO EXISTING MANHOLES SHALL BE IN ACCORDANCE WITH ITEM #1 OF PART 9, "MISCELLANEOUS", PAGE 116 OF THE AFOREMENTIONED MSD STANDARDS AND SPECIFICATIONS. GREAT CARE SHALL BE GIVEN TO PREVENT CRACKING AND/OR SPALLING OF THE CONCRETE STRUCTURE.

**EROSION CONTROL NOTES**

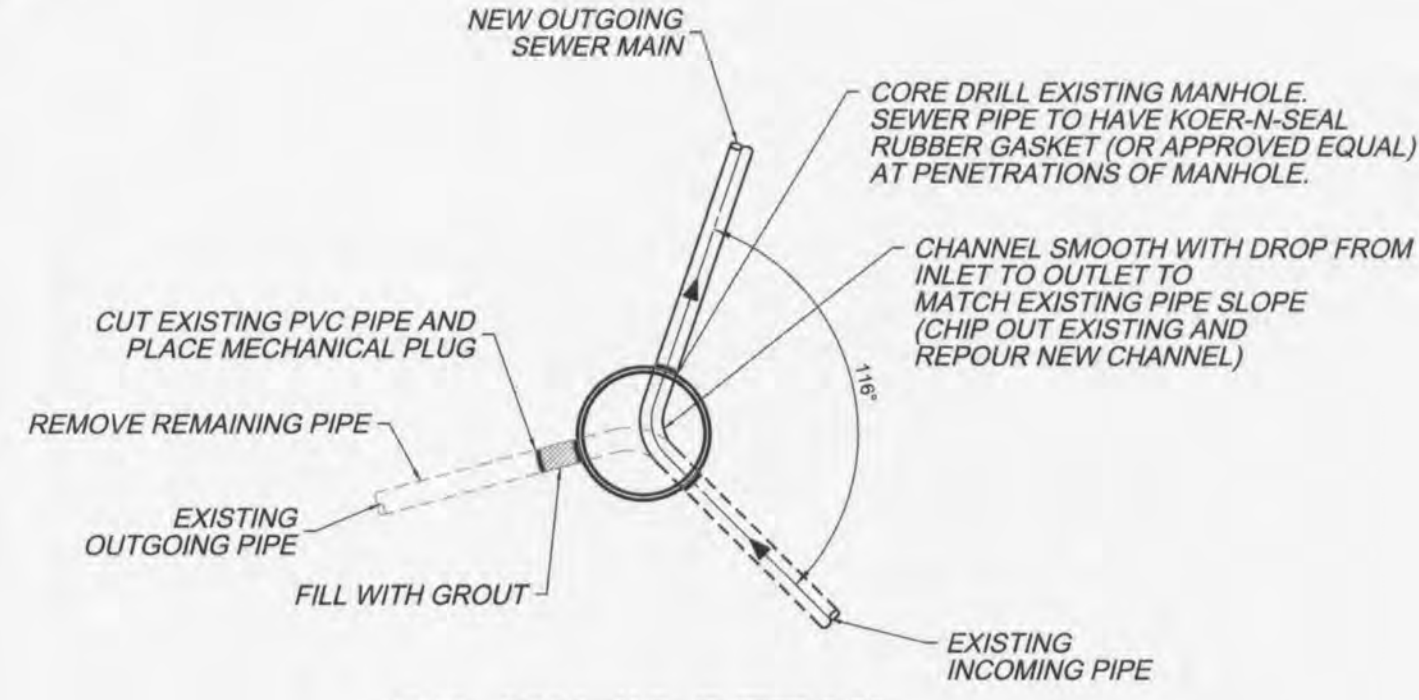
- EN #1 THE PERMITTEE SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE PERMITTEE SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). CONTROL SHALL COMMENCE WITH THE CLEARING OPERATIONS AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY CITY OF FALLON AND AS NEEDED BY MODOT. THE PERMITTEE'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE CITY OF FALLON AND AS REQUIRED BY MODOT MAY AT THEIR OPTION DIRECT THE PERMITTEE IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS AND/OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE CITY OF FALLON AND AS REQUIRED BY MODOT.
- EN #2 ALL EROSION CONTROL SYSTEMS ARE TO BE INSPECTED AND CORRECTED WEEKLY, ESPECIALLY WITHIN 48 HOURS OF ANY RAIN STORM RESULTING IN ONE-HALF INCH OF RAIN OR MORE. ANY SILT OR DEBRIS LEAVING THE SITE AND AFFECTING PUBLIC RIGHT OF WAY OR STORM WATER DRAINAGE FACILITIES SHALL BE CLEANED UP WITHIN 24 HOURS AFTER THE END OF THE STORM.
- EN #3 EROSION CONTROL DEVICES (SILT FENCE, SEDIMENT BASIN, ETC.) SHALL BE IN ACCORDANCE WITH ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL GUIDELINES.
- EN #4 GRADED AREAS SHALL BE SEEDED AND MULCHED (STRAWED) WITHIN 14 DAYS OF STOPPING LAND DISTURBANCE ACTIVITIES. UNLESS IT CAN BE SHOWN TO THE CITY ENGINEER THAT WEATHER CONDITIONS ARE NOT FAVORABLE, VEGETATIVE GROWTH IS TO BE ESTABLISHED WITHIN 6 WEEKS OF STOPPING GRADING WORK ON THE PROJECT. THE VEGETATIVE GROWTH ESTABLISHED SHALL BE SUFFICIENT TO PREVENT EROSION AND THE STANDARD SHALL BE AS REQUIRED BY EPA AND DNR. (70% COVERAGE PER SQUARE FOOT) ORD. 5242, SECTION 405.070



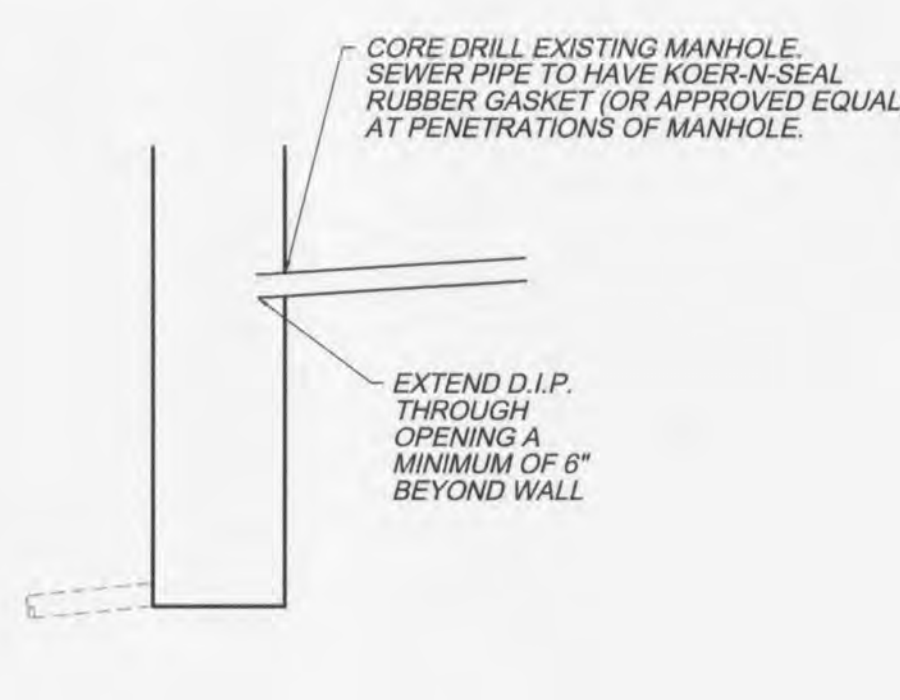
**CAUTION!!!**  
CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EXCAVATION OPERATIONS TO AVOID AND PROTECT EXISTING UNDERGROUND UTILITIES.



1-800-DIG-RITE



**EX. MH #2 DETAIL**  
NOT TO SCALE



**EX. MH #1 DETAIL**  
NOT TO SCALE

PROJECT SITE ADDRESS / LOCATION: SIGMUND PLACE, CITY OF ST. PAUL, ST. CHARLES COUNTY, MO 63366

SITE DEVELOPMENT ENGINEERING, INC. CORPORATE CERTIFICATE OF AUTHORITY No. 00128

**SDE** SITE DEVELOPMENT ENGINEERING, INC. PLANNING • CONSULTING • CIVIL ENGINEERING

3808 S. Lindbergh Blvd. Suite 106 St. Louis, Missouri 63127 314-822-4800

DATE: Sept. 15, 2013 JOB NO.: 213-021 DRAWN BY: DCT  
CHECKED BY: SDR SCALE: NOTED

**SIGMUND PLACE**

Profiles, Notes & Details

REV.: Oct. 6, 2013 MSD Review Comments  
Oct. 14, 2013 MSD Review Comments  
Oct. 22, 2013 Owner Comments  
Oct. 24, 2013 City Comments

STEVEN D. RUSH  
Civil Engineer  
License No. E-20332

DATE: 10/24/13

SHEET: **C-3**