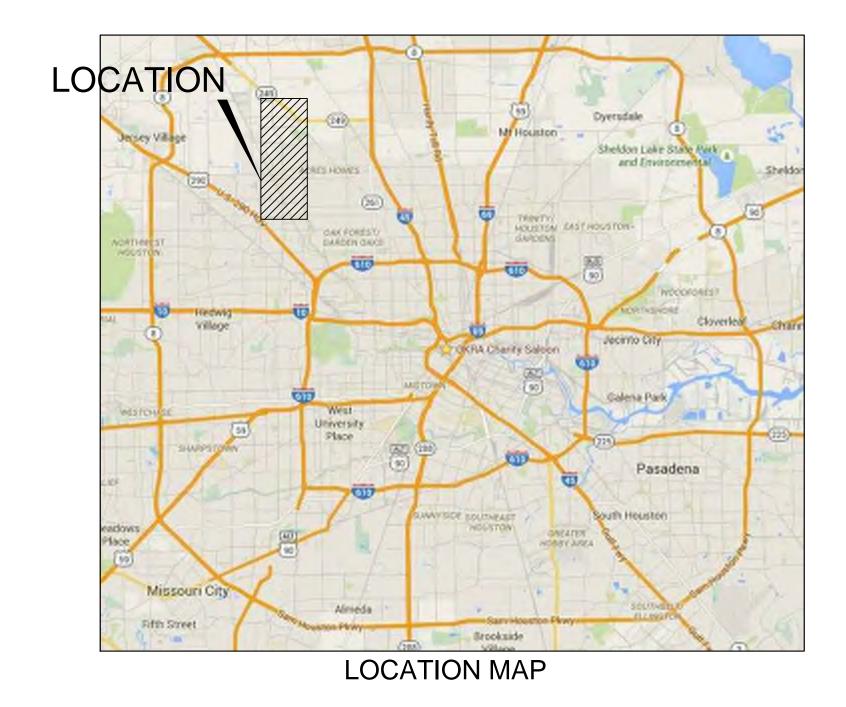
CONSTRUCTION PLANS FOR PROPOSED

Sitework, Landscape & Irrigation

NEAR NORTHWEST MANAGEMENT DISTRICT (NNMD) DISTRICT MARKERS (PHASE 2)

CITY OF HOUSTON, HARRIS COUNTY, TEXAS

MAINTENANCE AGREEMENT ORD. #2009-401



SIGN 4 SIGN 2 SIGN 5 SIGN 1

KEY MAP #: 450D, 410V, 411A, 451C, 411F, 411B, 411Y GIMS #: 5061D, 5061B, 5064D, 5063A, 5161A

VICINITY MAP

DRAWING INDEX

SHEET NO.	TITLE
01	COVER
02	GENERAL NOTES
03	SIGN LOCATIONS
04	SIGN LOCATIONS
05	SIGN LOCATIONS
06	SITEWORK DETAILS
07	PLANTING PLAN
08	PLANTING PLAN
09	PLANTING PLAN & DETAILS
10	IRRIGATION PLAN
11	IRRIGATION PLAN
12	IRRIGATION PLAN
13	IRRIGATION NOTES AND DETAILS
14	DISTRICT MARKER PLAN & PROFILE DRAWINGS
15	DISTRICT MARKER PLAN & PROFILE DRAWINGS
16	DISTRICT MARKER PLAN & PROFILE DRAWINGS

According to Map No. (48201C0655M) of the Federal Emergency Managemen
Agency's Flood Insurance Rate Maps for Harris County and Incorporated
Areas, dated June 9, 2014 the subject tract is situated within: X & AE

ONE-CALL NOTIFICATION SYSTEM CALL BEFORE YOU DIG!!! (713) 223-4567 (In Houston) (New Statewide Number Outside Houston) 1-800-545-6005

Contractor shall notify the City of Houston, Department of Public Works and Engineering, Office of the City Engineer, 48 hours before starting work on

APRIL 2018

TBG PROJECT No. H15375

this project. Telephone No. 832-394-9098

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Ward, Getz & Associates, LLP. TX FIRM No. F-9756 2500 Tanglewilde, Ste 120 Houston, Texas 77063 Voice: 713.789.1900 Contact:	
NOTE: CITY SIGNATURES V AFTER DATE OF SIGNATUR	ALID FOR ONE YEAR ONLY ES.
CITY OF DEPARTMENT OF PUBLIC	HOUSTON WORKS AND ENGINEERING
WATER	TRAFFIC AND TRANSPORTATION
WASTEWATER	STORM WATER QUALITY
STORM WATER	FACILITIES
STREET & BRIDGE	
CITY ENGINEER DATE	FOR CITY OF HOUSTON USE ONLY
DIRECTOR OF PUBLIC DATE WORKS AND ENGINEERING	
SHEET No. 1 OF 16	

GENERAL CONSTRUCTION NOTES

- 1. CONTRACTOR SHALL VERIFY ALL EXISTING BENCHMARKS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. IF NO VERIFICATION IS CONDUCTED CONTRACTOR SHALL ASSUME ALL
- 2. WATER LINES, WASTEWATER COLLECTIONS SYSTEMS AND DRAINAGE SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S "STANDARD CONSTRUCTION SPECIFICATIONS" DATED JANUARY 2011, AND *STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING® DATED JANUARY 2011 WITH ALL SUBSEQUENT AMENDMENTS ADDED THERETO UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN MUST AGREE WITH THE MINIMUM STANDARDS ESTABLISHED IN THE "INFRASTRUCTURE DESIGN MANUAL" DATED JANUARY 2011, NOTE THAT PLAN SIGNATURES EXPIRE AFTER 1 YEAR AND THE LATEST EDITIONS OF DESIGN RULES, SPECIFICATIONS & MANUALS SHALL
- 3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING PUBLIC OR PRIVATE UTILITY LINES. INCLUDING BUT NOT LIMITED TO WATER LINES. WASTEWATER COLLECTION SYSTEMS AND STORM SEWERS, DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING "STANDARD CONSTRUCTION SPECIFICATIONS" WITH LATEST ADDENDA AND AMENDMENTS THERETO, WITH NO COST TO THE PUBLIC.
- 4. EXISTING UTILITY INFORMATION SHOWN IS NOT GUARANTEED TO BE ACCURATE AND ALL INCLUSIVE. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES AND OTHER FACILITIES PRIOR TO CONSTRUCTION. ANY CONFLICT OR DISCREPANCY DISCOVERED MUST BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION.
- 5. THE CONTRACTOR SHALL NOTIFY THE CITY OF HOUSTON, ENGINEERING DEPARTMENT HARRIS COUNTY ENGINEERING DEPARTMENT, CENTERPOINT ENERGY AND ALL OTHER APPLICABLE AGENCIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK, NOTIFICATIONS SHALL BE FOLLOWED WITH A LETTER, COPIES OF WHICH SHALL BE SENT TO THE ENGINEER.
- 6. THE CONTRACTOR, ON BEHALF OF THE OWNER, IS TO OBTAIN ALL NECESSARY PERMITS REQUIRED BY THE CITY OF HOUSTON OR HARRIS COUNTY, PRIOR TO STARTING CONSTRUCTION.
- 7. GUIDELINES SET FORTH IN THE TEXAS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS CURRENTLY AMENDED, SHALL BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAG MEN, SIGNAGE, STRIPING, AND WARNING DEVICES, ETC... DURING CONSTRUCTION - BOTH DAY AND NIGHT.
- 8. THE LOADING AND UNLOADING OF ALL PIPE, VALVES, HYDRANTS, MANHOLES, AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDED PRACTICES AND SHALL AT ALL TIMES BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. THE CONTRACTOR SHALL LOCATE AND PROVIDE THE NECESSARY STORAGE AREAS FOR THE MATERIALS AND FOUIPMENT
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHIPPING AND STORING OF ALL MATERIALS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE SUCH MATERIAL AT THE POINT OF DELIVERY AND TO REJECT ALL DEFECTIVE MATERIAL. ANY DEFECTIVE MATERIAL INCORPORATED INTO THE WORK SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THERE SHALL BE NO PAYMENT MADE FOR STORED MATERIAL
- 10. ALL PIPE AND REINFORCEMENT STEEL SHALL BE KEPT FREE OF DIRT AND OTHER DEBRIS, ANY DAMAGE TO THE COATING OF THE VARIOUS MATERIALS MUST BE REPAIRED.
- 11. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE FINAL DRAFT OF STORMWATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACTIVITIES AS PREPARED BY HARRIS COUNTY/HCFCD, AND THE CITY OF HOUSTON ALL IN COMILIANCE WITH THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES)
- 12. ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES. 13. CONTRACTOR IS TO MAINTAIN A CLEAN PROJECT AREA, FREE FROM WORKMAN TRASH AND REFUSE, AT ALL TIMES.
- 14. THE CONTRACTOR IS REQUIRED TO FOLLOW ALL APPLICABLE OSHA RULES AND REGULATIONS. TRENCH SAFETY SHALL BE DONE IN ACCORDANCE WITH OSHA STANDARDS.
- 15. ALL STATIONS ARE CENTERLINE OF STREET RIGHT-OF-WAY UNLESS OTHERWISE NOTED.
- 16. ALL GEOTECHNICAL REPORTS (IF ANY) FOR THIS PROJECT ARE AVAILABLE FOR REFERENCE AT
- 17. SURFACE RESTORATION: AT THE END OF ALL CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL RESTORE THE EXISTING FACILITIES, I.E. THE PROPERTY, FOUAL TO OR BETTER THAN EXISTING SITE CONDITIONS PRIOR TO THE CONSTRUCTION. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN THE FINISHED ELEVATIONS SHOWN.

- 1) GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE STARTING CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY
- 2) BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.
- 3) CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF
- 4) CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS. FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
- 5) ALL EXISTING CONCRETE PAVING, SIDEWALK, AND CURB DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. DISPOSAL SHALL BE AT AN APPROVED OFF-SITE, LAWFUL. LOCATION, UNLESS DIRECTED OTHERWISE BY THE OWNER.

PAVING CONSTRUCTION NOTES

- 1. CONTRACTOR SHALL OBTAIN ENGINEERS OR OWNERS APPROVAL OF GRADES PRIOR TO PLACEMENT OF ANY PAVEMENT. IF APPROVAL IS NOT OBTAINED CONTRACTOR SHALL BE RESPONSIBLE FOR PAVEMENT PLACED.
- 2. ALL TEMPORARY AND PERMANENT SIGNAGE MUST COMPLY WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MOST RECENT EDITION WITH REVISIONS.
- 3. ALL PAVING WIDTHS, CURB RADII, AND CURB ALIGNMENT SHOWN INDICATE FACE OF CURB. T.C. INDICATES TOP OF CURB. T.P. INDICATES TOP OF PAVEMENT ELEVATIONS.
- 4. THE CONTRACTOR SHALL PROTECT ALL UTILITIES, SIDEWALKS, PAVEMENT, ETC. AND SHALL REPAIR OR REPLACE AT HIS EXPENSE ANY FACILITIES DAMAGED DURING PAVING OR GRADING OPERATIONS
- 5. DRIVEWAY CONNECTIONS IN CITY OF HOUSTON STREET RIGHT-OF-WAY SHALL COMPLY WITH CITY OF HOUSTON DRAWING NO. 17201-1 AND DRIVEWAY DETAILS ON THESE PLANS.
- 6. AREAS TO BE FILLED SHALL BE SCARIFIED AND COMPACTED TO AT LEAST 95% OF MAXIMUM STANDARD PROCTOR DENSITY (+3%, OF OPTIMUM MOISTURE) PER ASTM D-698 TO A DEPTH OF 6* PRIOR TO FILL PLACEMENT. FILL MATERIAL SHALL BE PLACED IN MAXIMUM 8" THICK LIFTS (MEASURED LOOSE) AND COMPACTED TO AT LEAST 95% OF MAXIMUM STANDARD PROCTOR. DENSITY (+ 3% OF OPTIMUM MOISTURE) PER ASTM D-698. FILL SHALL BE CLEAN EARTH AND BE FREE FROM TRASH, VEGETATION AND LARGE STONES. TEST REPORTS SHALL BE SUBMITTED PRIOR TO PLACEMENT OF PAVEMENT.
- 7. NECESSARY TESTING OF SUBGRADE AND PAVEMENT TO PROVE THAT THESE ITEMS MEET REQUIREMENTS SHALL BE DONE BY A COMMERCIAL TESTING LABORATORY ENGAGED BY THE
- 8. WHERE PROPOSED PAVEMENT IS TO MEET EXISTING PAVEMENT. THE EXISTING REBAR OR DOWELS SHALL BE CLEANED AND TIED INTO THE PROPOSED PAVEMENT, USING A MINIMUM OF 30 BAR DIAMETERS LAPS. WHERE PROPOSED CONCRETE ENDS AT A CONSTRUCTION JOINT OR EXPANSION JOINT, THE REBAR SHALL BE EXTENDED A MINIMUM LENGTH OF 30 BAR DIAMETERS, COATED WITH ASPHALT AND WRAPPED WITH BURLAP.
- 9. ALL CONCRETE PAVEMENT SHALL BE OF SPECIFIED THICKNESS SHOWN. ALL CONCRETE SHALL BE A 5 % SACK MIX WITH A MINIMUM 500 P.S.I. FLEXURAL STRENGTH AT 7 DAYS AND A MINIMUM 3500 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS, REINFORCING STEEL SHALL CONFORM TO ASTM
- 10. ALL CUL-DE-SAC ISLANDS AND MEDIANS SHALL HAVE STANDARD 6"CONCRETE CURBS.
- 11. SIDEWALKS SHALL BE BUILT IN ACCORDANCE WITH CITY OF HOUSTON AND HARRIS COUNTY DESIGN STANDARDS. ALL INTERSECTIONS SHALL BE CONSTRUCTED WITH WHEELCHAIR RAMPS, IN CONFORMANCE WITH THE GOVERNOR'S OFFICE OF TRAFFIC SAFETY MEMORANDUM DATED MAY 6, 1976 (HIGHWAY SAFETY ACT, 1973, SEC 288), AMERICANS WITH DISABILITIES ACT (ADA) AND TEXAS ACCESSIBILITY STANDARDS (TAS) SHALL BE COMPLIED WITH IN ALL SIDEWALK CONSTRUCTION.
- 12. CONCRETE WASH-OUT AREAS ARE TO BE PROVIDED BY THE CONTRACTOR AT A LOCATION ACCEPTABLE TO THE OWNER UNDER NO CIRCUMSTANCES IS THE CONTRACTOR TO PERMIT CONCRETE TRUCKS TO WASH AT ANY AREA OTHER THAN THAT DESIGNATED.
- 13. STREET NAME SIGNS SHALL BE BUILT IN ACCORDANCE WITH CITY OF HOUSTON REQUIREMENTS

AND SPECIFICATIONS, AND BEAR STREET NAMES AS PER RECORDED PLAT.

- 14. A DOUBLE-REFLECTORIZED BLUE TRAFFIC MARKER SHALL BE PLACED ON A ONE FOOT OFFSET OF THE PAVEMENT CENTERLINE AT ALL FIRE HYDRANT LOCATIONS BY THE CONTRACTOR. HYDRANTS LOCATED AT INTERSECTIONS SHALL HAVE A MARKER PLACED ON EACH STREET. THERE WILL BE NO SEPARATE PAYMENT FOR THESE MARKERS
- 15. DRIVEWAYS WITH TXDOT R.O.W. SHALL BE CONSTRUCTED IN ACCORDANCE WITH TXDOT STANDARDS.

GENERAL NOTES - INSIDE CITY LIMITS

WORKS AND ENGINEERING.

- 1. CONSTRUCT WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING IN ACCORDANCE WITH THE LATEST EDITION OF THE PUBLICATIONS STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS. WATER LINES, STORM DRAINAGE AND STREET PAVING, AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS. WATER LINES, STORM DRAINAGE, AND STREET PAVING PUBLISHED BY THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC
- THE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT WAS CONDUCTED IN ACCORDANCE WITH CHAPTER 11 OF THE LATEST EDITION OF THE PUBLICATION INFRASTRUCTURE DESIGN MANUAL, PUBLISHED BY THE CITY OF HOUSTON, DEPARTMENT OF THE PUBLIC WORKS AND ENGINEERING. SOILS REPORT WAS PREPARED BY [GEOTECHNICAL ENGINEERING FIRM] REPORT NO. [NO. OF REPORT], DATED [DATE OF REPORT]
- UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION, CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT 713-223-4567/811 OR 800-344-8377 AND LONE STAR NOTIFICATION CENTER AT 800-869-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING WATER, WASTEWATER, STORM WATER LINES AND TRAFFIC CONTROL DEVICES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEM, WATER LINES, STORM DRAINAGE, AND STREET PAVING AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING, REFERENCED ABOVE, AT NO ADDITIONAL
- 5. CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING @ 832-394-9098 OR VIA FAX AT 832-395-4424 FOR INSPECTION AT

LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.

- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.
- CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREA OF EXCAVATION.
- CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION
- 9. CONTRACTOR SHALL MAINTAIN A SET OF REDLINE DRAWINGS AND RECORD AS-BUILT CONDITIONS DURING CONSTRUCTION. THESE REDLINE MARKED UP DRAWINGS WILL BE SUBMITTED TO THE DESIGN CONSULTANT WHO WILL MAKE THE CHANGES ON THE ORIGINAL TRACINGS, LABEL EACH SHEET IN THE SET AS "RECORD DRAWINGS", AND RETURN IT TO THE OFFICE OF THE CITY ENGINEER.

TRAFFIC NOTES

- . CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS MUTCD, MOST RECENT EDITION WITH REVISIONS) DURING CONSTRUCTION
- 2. NO LANES SHALL BE CLOSED DURING THE HOURS OF 5:30 AM TO 7:00 PM MONDAY THRU FRIDAY I DOWNTOWN/MIDTOWN AREA
- NO TRAFFIC LANES SHALL BE CLOSED DURING THE HOURS OF 7:00 AM TO 9:00 PM AND 4:00 PM TO 6:00 PM MONDAY THRU FRIDAY.
- 4. NO LANES SHALL BE CLOSED IN RESIDENTIAL AREA FROM 7:00 PM TO 7:00 AM.
- 5. CONTRACTOR SHALL MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING
- 6. CONTRACTOR SHALL COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS AND OPEN LANES FOR NORMAL TRAFFIC FLOW. OFF DUTY UNIFORMED POLICE OFFICER(S)/FLAGGER(S) IS/ARE REQUIRED TO DIRECT TRAFFIC
- WHEN LANES ARE BLOCKED. IN THE EVENT WHEN NO "TRAFFIC CONTROL PLANS" EXIST AS A PART OF CONTRACT DRAWINGS.
- CONTRACTOR MAY PREPARE* PLANS AND SUBMIT TO PLAN REVIEW SECTION FOR APPROVAL TEN | CAUTION: OVERHEAD ELECTRICAL FACILITIES WORKING DAYS PRIOR TO IMPLEMENTATION
- THESE PLANS SHALL BE DRAWN TO SCALE ON REPRODUCIBLE MYLARS AND SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS. PLANS WILL BECOME A PART OF THE CONTRACT
- 9. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF "TRAFFIC CONTROL PLANS" DURING THE CONSTRUCTION THAN WHAT IS OUTLINES IN THE CONTRACT DRAWINGS, HE/SHE SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING AN ALTERNATE SET OF PLANS* TO THE PLAN REVIEW SECTION FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION.
- 10. APPROVED COPIES OF "TRAFFIC CONTROL PLANS" AND LANE SIDEWALK CLOSURE PERMITS SHALL BE AVAILABLE FOR INSPECTION AT THE JOB SITE AT ALL TIMES. THE CONTRACTOR MUST SECURE "LANE/SIDEWALK CLOSURE PERMITS" FROM THE CITY'S TRAFFIC DIVISION BEFORE CLOSING A LANE/SIDEWALK. THE REQUEST MUST BE MADE AT LEAST TEN BUSINESS DAYS PRIOR TO THE DATE FOR WHICH THE CLOSURE IS SOUGHT. NOTE THAT WORKING HOURS MAY BE RESTRICTED OR THE REQUEST MAY BE DENIED. CALL 832-395-3020 FOR AN APPLICATION.

SWPPP CONSTRUCTION NOTES

- . CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPPP) PLANS TO KEEP SILT AND/OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.
- 2. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATED MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT, ANY LOOSE EXCAVATED MATERIAL WHICH FALL ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA.
- CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY. AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED
- 4. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION
- . CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5
- INCHES OR GREATER.
- A) DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED. B) AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
- C) STRUCTURAL CONTROL MEASURES. D) LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
- CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND/OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING

STREET, BRIDGE, AND R.O.W.

- . DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S "STANDARD CONSTRUCTION SPECIFICATIONS" AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN IS CONSISTENT WITH THE MINIMUM STANDARDS ESTABLISHED IN THE "INFRASTRUCTURE DESIGN MANUAL" REFERENCED AT http://documents.publicworks.houstonbr.gov/document-center/cat_view/88-engineering-and-
- construction/90-design-manuals/364-city-of-houston-infrastructure-design-manual.html
- FILL AREAS ON PLANS SHALL BE FILLED IN LAYERS NOT EXCEEDING 8" IN DEPTH AND EACH COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY PRIOR TO INSTALLATION OF WATER LINE AND FILL AREA SHALL BE SEEDED AND FERTILIZED WITHIN 10 WORKING DAYS.
- . UTILITY CONTRACTOR SHALL PROVIDE TEMPORARY SILT BARRIER FENCE ON ALL NON-CURBED INLETS WHICH WILL REMAIN IN PLACE AFTER UNDERGROUND CONTRACT IS COMPLETE. CONTRACTOR SHALL PROVIDE SILT BARRIER FENCE ON ALL STAGE 1 CURB INLETS.
- 5. EXISTING PAVEMENTS, CURBS, DRIVEWAYS, AND SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF HOUSTON STANDARDS, WITH LATEST ADDENDA AND AMENDMENTS THERETO
- 3. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY UPON COMPLETION OF JOB SHALL BE AS GOOD AS OR BETTER THAN PRIOR TO STARTING WORK.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO SATISFACTION OF THE OWNING AUTHORITY.
- EXPOSED 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE #6 BARS 24" LONG 24" C-C DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL. CONTRACTOR TO TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS,
- PLANTS AND TREES ALONG AREAS OF EXCAVATION. 0. CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAWS CONCERNING EXCAVATION, TRENCHING AND SHORING AS SPECIFIED IN CITY OF HOUSTON
- . WHEEL CHAIR RAMPS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON STANDARDS AT ALL INTERSECTIONS WHERE SIDEWALKS EXIST AND THE EXISTING CURB OR SIDEWALK IS DAMAGED OR REMOVED DURING CONSTRUCTION.
- 2. WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S "STANDARD CONSTRUCTION SPECIFICATIONS" AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING" UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN SHOULD BE CONSISTENT WITH THE MINIMUM STANDARD ESTABLISHED IN THE *DESIGN MANUAL FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORMS DRAINAGE AND STREET PAVING".
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES TO EXISTING WATER. WASTEWATER, STORM SEWER AND TRAFFIC SIGNAL CONDUITS, ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPT. OF PUBLIC WORKS AND ENGINEERING "STANDARD CONSTRUCTION SPECIFICATIONS" WITH LATEST ADDENDA AND AMENDMENTS THERETO, AT NO COST TO THE CITY OF HOUSTON.
- 14. PRIOR TO STREET CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OF PUBLIC WORKS AND ENGINEERING AT (PHONE) 832-394-9098 OR 832-395-4424(FAX) AND COMPLY WITH ALL REQUIREMENTS FOR THE ISSUANCE OF NECESSARY PERMITS/WORK ORDERS FOR STREET CONSTRUCTION.
- 5. DOUBLE REFLECTORIZED BLUE TRAFFIC MARKERS SHALL BE PLACED 6-INCHES OFFSET OF THE CENTERLINE OF ALL FIRE HYDRANT LOCATIONS BY THE PAVING CONTRACTOR. HYDRANTS LOCATED AT INTERSECTIONS SHALL HAVE A BUTTON PLACED ON EACH STREET.

PRIVATE UTILITY NOTES

- OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES,
- ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX(6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES: AND
- OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG. PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH
- RIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222. ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY:
- NO APPROVAL TO USE, CROSS, OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-6348 OR (713) 207-5769.

CAUTION: TELEPHONE FACILITIES

- I. THE LOCATIONS OF TELEPHONE UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
- 2. THE CONTRACTOR SHALL CALL 1-800-344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.
- 3. WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF SBC FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING THE CONTRACTOR SHALL EXPOSE THE SBC FACILITIES.
- 4. WHEN TELEPHONE FACILITIES ARE EXPOSED, THE CONTRACTOR SHOULD PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES, WHEN EXCAVATING NEAR TELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.
- 5. THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.
- PLEASE CONTACT THE AT&T TEXAS/SWBT DAMAGE PREVENTION MANAGER MR. ROOSEVELT LEE JR. (713)567-4552 OR E-MAIL HIM AT RL7259@ATT.COM, IF THERE ARE QUESTION ABOUT BORING OR EXCAVATING NEAR OUR AT&T TEXAS/SWBT FACILITIES.

CAUTION: UNDERGROUND GAS FACILITIES

- LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY. INTRASTATE PIPELINE LLC, WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINE FIELD LOCATED.
 - WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL 713-945-8036 or 713-945-8037 (7:00 AM TO 4:30 PM) FOR STATUS OF LINE LOCATION REQUEST BEFORE
 - WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
 - WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
 - FOR EMERGENCIES REGARDING GAS LINES CALL 713-659-3552 OR 713-207-4200.
 - THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

LANDSCAPE PLANTING NOTES:

- 1.) CONTRACTOR SHALL RECEIVE SITE AT APPROXIMATELY FINAL GRADE WITH THE EXCEPTION OF ENTRY FEATURE AREA. LANDSCAPE CONTRACTOR SHALL FILL AREA AROUND WALLS PER TYPICAL WALL SECTION, PLAN AND LANDSCAPE GRADING NOTES WITH BACKFILL PROVIDED BY CONTRACTOR. ALL SLOPES SHALL BE SMOOTH AND UNIFORM WITH A MAXIMUM SLOPE OF 3:1 UNLESS OTHERWISE NOTED. TIE INTO EXISTING ADJACENT GRADES SMOOTHLY AND FINE GRADE FOR POSITIVE DRAINAGE AND TO PREVENT WATER FROM STANDING. CUT SWALES TO DIRECT WATER AWAY FROM ALL STRUCTURES AND PROPERTY LINES, AND TOWARDS STORM SEWER INLETS. DO NOT DRAIN ANY WATER TOWARDS LOTS/EASEMENTS. FINAL LOCATION AND HEIGHT OF BERMS TO BE APPROVED BY LANDSCAPE ARCHITECT IN FIELD.
- PROVIDE MINIMUM 8" OF GRANULAR FILL WRAPPED IN FILTER FABRIC BEHIND WALLS AND TO A DEPTH BELOW WEEP HOLES TO ALLOW FOR PROPER DRAINAGE (REFERENCE TYPICAL WALL SECTION, PLANTING DETAIL SHEET).
- 2.) SHRUB BEDS: REFERENCE SPECIFICATIONS AND DETAILS FOR PLANTING REQUIREMENTS, MATERIALS, AND EXECUTION, INCLUDING PLANT PIT DIMENSIONS AND BACKFILL REQUIREMENTS. SHRUBS AND GROUNDCOVER TO BE TRIANGULARLY SPACED (SPACING PER PLANS AND PLANT LIST). RYERSON 3/16" X 4" STEEL EDGING (DARK GREEN) SHALL BE INSTALLED TO SEPARATE ALL BEDS FROM TURF AREAS. REFERENCE PLANTING BED DETAIL FOR DRAINAGE REQUIREMENT OF ALL BEDS OCCURRING DIRECTLY AT THE BACK OF CURB. NOTE: BACKFILL ALL SHRUB PITS WITH SPECIFIED PLANTING MIX. INCORPORATE 5 LBS OF 13-13-13 FERTILIZER PER CU. YD. OF MIX INTO ALL PLANTING BEDS . ALL BEDS SHALL RECEIVE MIN. 2" DEEP COMPOSTED HARDWOOD BARK MULCH.
- 3.) TREE PLANTING: REFERENCE SPECIFICATIONS AND DETAILS FOR PLANTING REQUIREMENTS, MATERIALS, AND EXECUTION, INLUDING STAKING METHODS, PLANT PIT DIMENSIONS, AND BACKFILL REQUIREMENTS. GUY ALL TREES 4" CALIPER AND GREATER, AND STAKE ALL TREES SMALLER THAN 4" CALIPER UNLESS MACHINE MOVED. STAKE ALL MACHINE MOVED TREES WITH THREE (3) METAL T STAKES PER DETAIL. NOTE: BACKFILL ALL TREE PITS WITH SPECIFIED PLANTING MIX AND INCORPORATE 5 LBS OF 13-13-13 FERTILIZER PER CU. YD. OF MIX INTO ALL TREE PITS. ALL TREE WATER RETENTION BASINS SHALL RECEIVE MIN. 2" DEEP COMPOSTED HARDWOOD BARK MULCH.
- 4.) TREES SHALL BE LOCATED MINIMUM OF 5' 0" FROM WALLS, OVERHEADS, WALKS, EDGING, CURBS AND OTHER TREES WITHIN THE PROJECT. IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR TO CONTACT LANDSCAPE ARCHITECT FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE LANDSCAPE ARCHITECT MAY RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE MATERIALS.
- 5.) ALL PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT 5 DAYS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES.
- 6.) LAWN INSTALLATION: PRIOR TO APPLICATION OF HYDROMULCH, CONTRACTOR SHALL APPLY CONTACT HERBICIDE (RECOMMENDED MIXTURE OF IMAGE AND ROUNDUP) TO REMOVE ALL EXISTING WEEDS AS NECESSARY, SCARIFY EXISTING SOIL TO SPECIFIED DEPTHS. REMOVE ALL LUMPS, CLODS, TRASH AND STICKS GREATER THAN 1". FINE GRADE TO PROVIDE POSITIVE DRAINAGE AND SMOOTH LAWN AREAS AND CUT SWALES AS NECESSARY TO ENSURE NO PONDING OF WATER. LAY BERMUDA SOD STRIP ALONG BACK OF CURB AND EDGE OF WALK IN TURF AREAS, AND WITHIN APPROXIMATE LIMITS SHOWN ON PLANS. FINISHED GRADE OF LAWN AND PLANTING BED AREAS TO BE MINIMUM 1/2" BELOW FINISHED GRADE OF ADJACENT PAVEMENT, NOTE: CONTRACTOR SHALL APPLY RECOMMENDED PRE-EMERGENT HERBICIDE FOR PREVENTION OF NUTGRASS AND WEEDS UPON ESTABLISHMENT OF BERMUDA LAWN APPROXIMATELY ONE MONTH AFTER HYDROMULCH APPLICATION. FERTILIZE AT SPECIFIED RATES MONTHLY DURING 90 DAY MAINTENANCE PERIOD.

IRRIGATION NOTES:

) COORDINATE IRRIGATION INSTALLATION WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE MANDATED IRRIGATION ORDINANCES AND CODES, AND WILL SECURE ALL REQUIRED PERMITS. L.I.C. SHALL PAY ANY ASSOCIATED FEES UNLESS OTHERWISE NOTED. ALL LOCAL CODES SHALL PREVAIL OVER ANY DISCREPANCIES HEREIN AND SHALL BE ADDRESSED BEFORE ANY

B-B = BACK TO BACK

BOC = BACK OF CUR

PBW = BASE OF WALL

= FLOWLINE

= GUTTER

= JUNCTION BOX

= MATCH EXISTING

= LINEAR FEET

MINIMUM 2 FEET VERTICAL CLEARANCE

PLACE 1 FULL SECTION (MIN 18 FT) OF

LEAST 9 FT HORIZONTALLY FROM

LEAST 9 FT HORIZONTALLY FROM

WITH PRESSURE-RATED DIP OR

FOR BOTH DIP AND PVC PIPE

THE JOINTS ON EACH END

PLACE 1 FULL SECTION (MIN 18 FT) OF

SS CENTERED AT WL CROSSING. PROVIDE

REPLACE 1 FULL SECTION OF EXISTING SS

PRESSURE-RATED PVC PIPE WITH ADAPTERS

PROVIDE DIP FOR SMALL DIAMETER WL (LESS THAN 24 INCHES), PVC PIPE IS ONLY ALLOWED

TAC 290.44, AND USE RESTRAINED JOINTS

EMBED SS WITH CSS FOR THE TOTAL LENGTH

OF 1 PIPE SEGMENT PLUS 1 FOOT BEYOND

MIN 150 PSI SS CENTERED AT WL CROSSING. PROVIDE RESTRAINED JOINTS ON SS,

150 PSI PRESSURE PIPE (MIN 18 FT) TWO

NOMINAL SIZES LARGER WITH SPACERS AT 5

SPACED AT LEAST 9 FT HORIZONTALLY FROM

CENTERLINE OF WL OR ENCASE IN A JOINT OF

PLACE 1 FULL SECTION (MIN 18 FT) OF

AND RESTRAINED JOINTS CENTERED AT WL

RESTRAINED JOINTS ON SS. SPACED AT

CENTERLINE OF SS

CENTERLINE OF WL

IF ENCASED AS PER

CROSSING

FT INTERVAL

WL CENTERED AT SS CROSSING, PROVIDE

RESTRAINED JOINTS ON WL, SPACED AT

HP = HIGH POINT

= LEFT

MH = MANHOLE

= HYDRAULIC GRADIENT

ESM'T = EASMENT

EX = EXISTING

= BUILDING LINE

BBR = BOTTOM OF RAM

NG = NATURAL GROUND

= SANITARY SEWER

SSE = SANITARY SEWER EASEMENT

= TOP OF WALK OR WALL

WS&D = WATER, SANITARY & DRAINAGE

PROP. WATER LINE PROP. SANITARY SEWER

OVER

UNDER

ROW = RIGHT-OF-WAY

= RADIUS

STM SWR = STORM SEWER

= TOP OF GRATE

= TOP OF RAMP

UE = UTILITY EASMENT

WL = WATERLINE

OVER UNDER

TABLE 7.3

PROTECTION REQUIREMENTS AT

WATER LINE (WL) - SANITARY SEWER (SS) CROSSINGS

= TOP OF PAVEMENT

TC = TOP OF CURB

= RIGHT

PROP = PROPOSE

- 2.) CONFIRM MINIMUM STATIC WATER PRESSURE OF 60 PSI AT THE HIGHEST ELEVATION OF THE SYSTEM LIMITS, AND MAXIMUM STATIC WATER PRESSURE OF 90 P.S.I. AT THE LOWEST ELEVATION OF THE SYSTEM LIMITS AT LEAST 7 DAYS BEFORE BEGINNING WORK. IF STATIC WATER PRESSURE IS OUTSIDE THE RANGE STATED ABOVE, DO NOT PROCEED UNTIL DIRECTED BY THE LANDSCAPE
- 3.) LATERAL PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES. MAINLINE PIPE AND WIRES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18 INCHES. NO MACHINE TRENCHING SHALL BE PERMITTED WITHIN EXISTING TREE ROOT ZONES. WHEN HAND - TRENCHING WITHIN EXISTING TREE ROOT ZONES, NO ROOTS LARGER THAN 1" DIAMETER SHALL BE CUT.
- CONTRACTOR IS TO CONTACT APPROPRIATE AUTHORITIES AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
- THE PROPOSED LOCATIONS OF ALL ABOVE- GROUND EQUIPMENT INCLUDING BACKFLOW PREVENTORS, AND WEATHER SENSORS SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR
- OWNER'S REPRESENTATIVE BEFORE THESE ITEMS ARE INSTALLED.
- B.) WHERE SHOWN ON THE PLANS, MASS SHRUB / GROUNDCOVER BEDS SHALL INCLUDE HUNTER PLD SERIES DRIP TUBE WITH PRE-INSTALLED .6 GPH DRIP EMITTERS EVERY 12" (PLD-06-12) , INSTALLED IN CENTER-FED GRIDS WITH ROWS SPACED 18" APART. INDIVIDUAL DRIP TUBE RUNS SHALL NOT EXCEED 200 L.F. SEE DRIP GRID DETAILS FOR HEADER AND EXHAUST PIPE SIZES. WHERE REQUIRED, PVC LATERAL "TRUNK" LINES SHALL BE INSTALLED 10" DEEP. DRIP TUBE SHALL BE SET 2" BELOW FINISHED SOIL GRADE (NOT INCLUDING MULCH LAYER), SECURED WITH 6" WIRE STAPLES OR STAKES EVERY 18". MANUAL FLUSH VALVES (1/2" PVC BALL VALVE) SHALL BE INSTALLED AT THE FARTHEST POINTS FROM THE ZONE VALVE. USE 17 MM BARBED FITTINGS FOR DRIP LINE CONNECTIONS, PRESSURE TESTING ALL CONNECTIONS BEFORE BACKFILLING. ALL DRIP TUBING SHALL BE INSTALLED PERPENDICULAR TO SLOPE FACE. EACH DRIP ZONE SHALL INCLUDE ONE "MAINTENANCE FLAG" WHICH SHALL CONSIST OF A 12" POP-UP SPRAY HEAD AND COMPLETELY CLOSED SPRAY NOZZLE. THE POP-UP HEAD SHALL BE CONNECTED TO THE DRIP ZONE PIPE, SET FLUSH WITH GRADE, AND LOCATED AT THE FARTHEST DISTANCE FROM THE DRIP VALVE ASSEMBLY.
- 7.) T. ELECTRIC POWER SHALL BE PROVIDED AT THE CONTROLLER LOCATION BY GENERAL CONTRACTOR. L.I.C. TO PROVIDE FINAL HARD-WIRE CONNECTION TO THE CONTROLLER.

CENTERPOINT ENERGY NOTICE: your safety, you are required by Texas Law to call 811 at least 48 hours before you dig VERIFICATION OF PRIVATE UTILITY LINES

Signature verifies that you have shown CMP Natural Gas lines correctly - not to be used for conflict verification.) service lines are not shown.) Ammor Signature verifies existing underground facilities - not to be used for conflict verification.) nature Valid for six months.

1/mm pm

REV	DESCRIPTION	D
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Ward, Getz & Associates, L
TX FIRM No. F-9756
2500 Tanglewilde, Ste 120
Houston, Texas 77063
Voice: 713.789.1900
Contact:

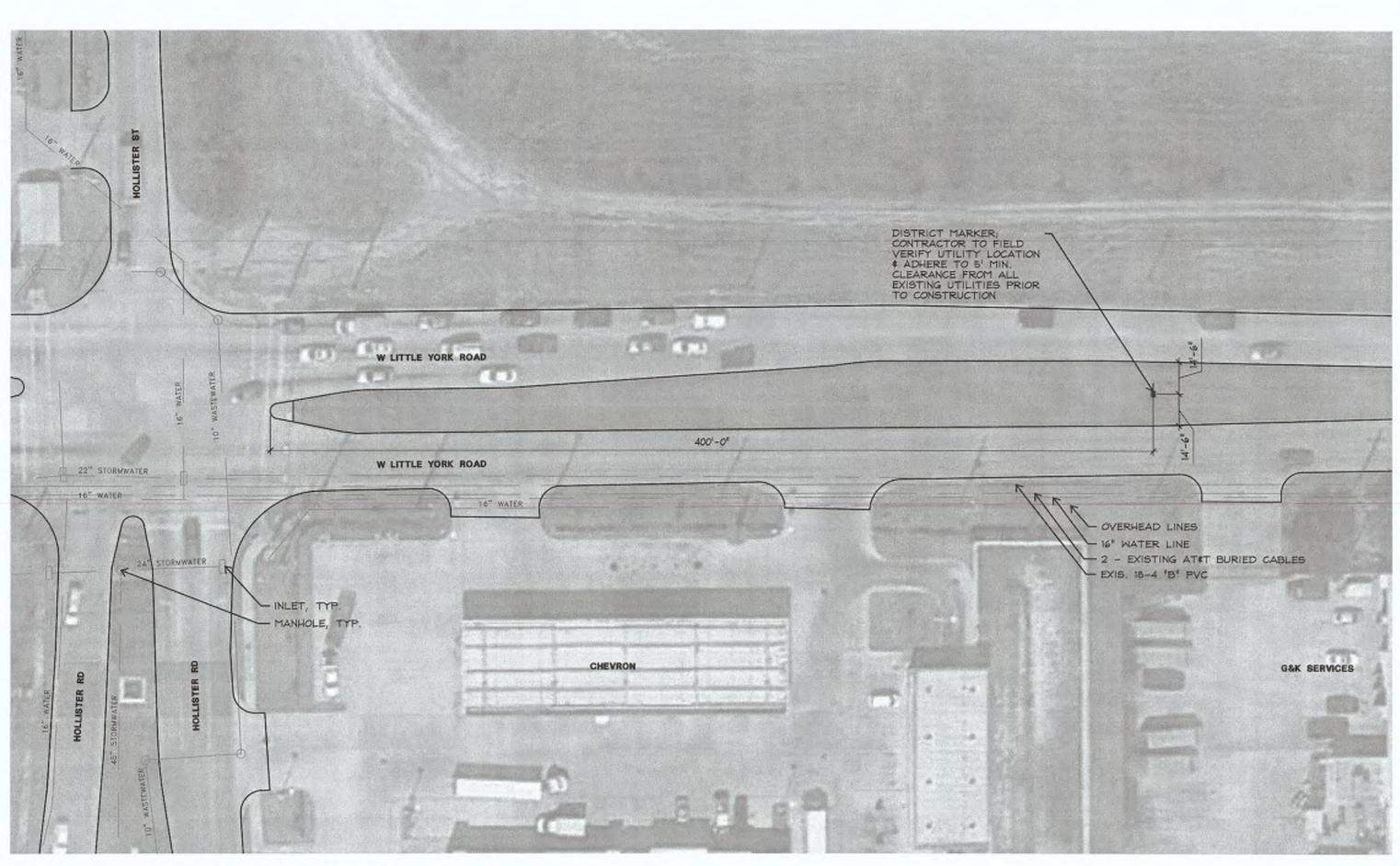
NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING TORM WATER QUALITY

FILE NO:

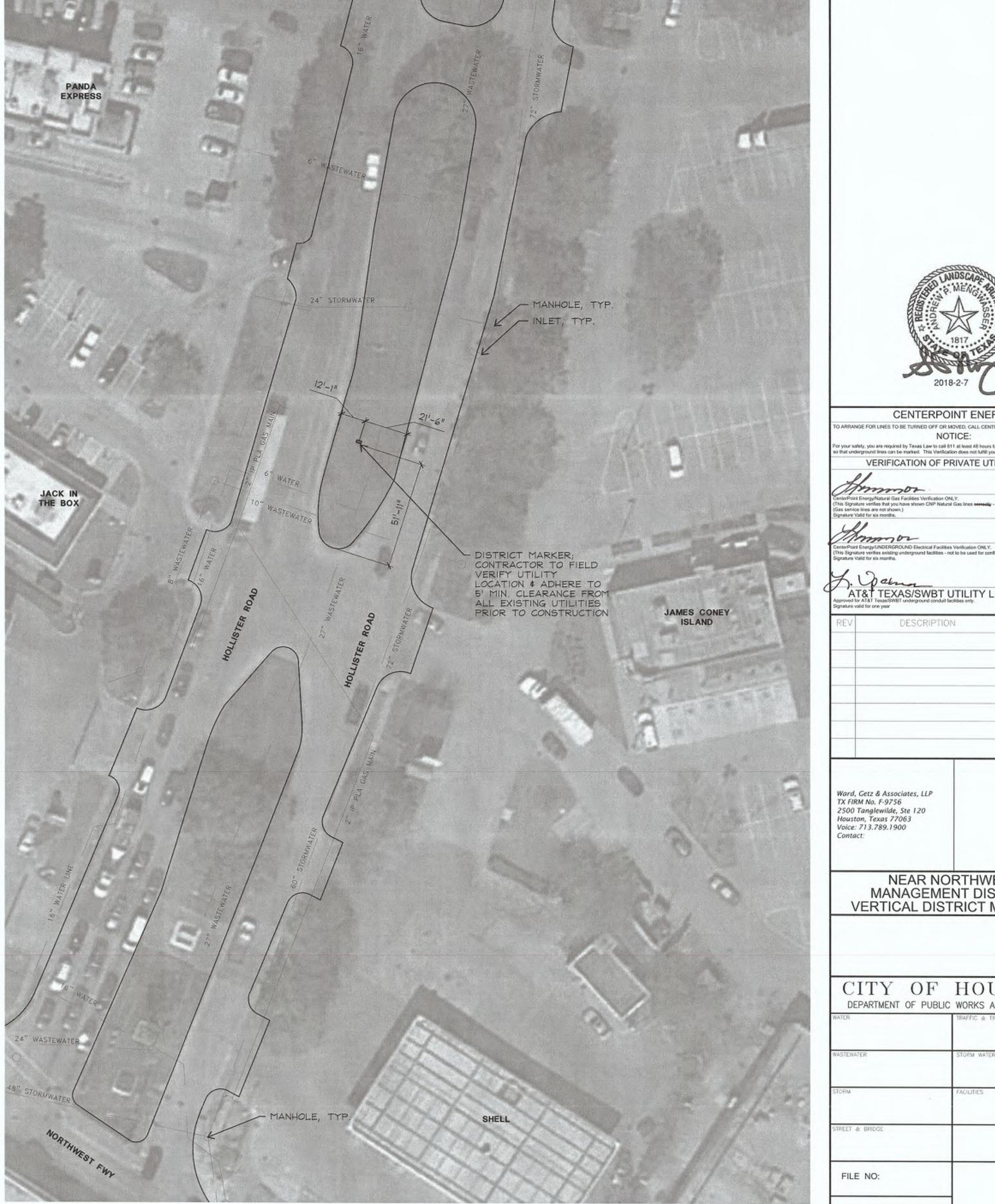
REET & BRIDGE

DRAWING SCALE:



2 LITTLE YORK & HOLLISTER





1 290 AND HOLLISTER

SCALE: 1*=30'

DRAWING SCALE:

SHEET No. 3 OF 16

FILE NO:

CENTERPOINT ENERGY ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-222.

VERIFICATION OF PRIVATE UTILITY LINES

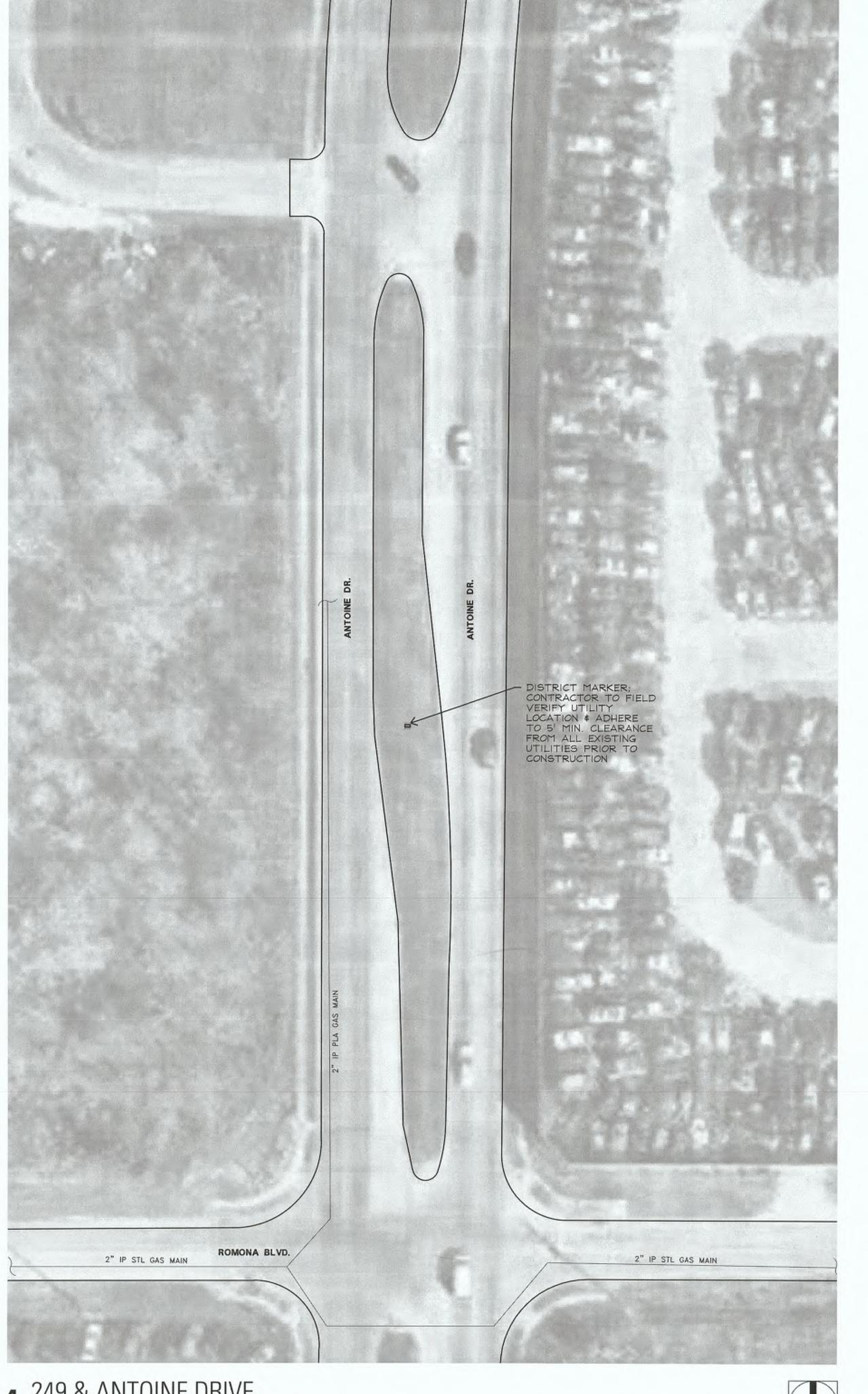
AT&T TEXAS/SWBT UTILITY LINES SHOWN

NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DESCRIPTION

or your safety, you are required by Texas Law to call 811 at least 48 hours before you dig a that underground lines can be marked. This Verification does not fulfill your obligation to call 611.



4 249 & ANTOINE DRIVE SCALE: 1"=30"





3 249 & N. HOUSTON ROSSLYN

SCALE: 1"=30' NORTH

CENTERPOINT ENERGY

D ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-22222 NOTICE: ryour safety, you are required by Texas Law to call 811 at least 48 hours before you dig that underground lines can be rearked. This Verification does not fulfill your obligation to call 811. VERIFICATION OF PRIVATE UTILITY LINES

CemberPoint EnergyNational Gas Facilities Verification CNLY.
(This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.)
(Gas service lines are not shown.)
Signature Valid for six months.

Date

Center Point Energy UNDERGROUND Electrical Facilities Verification CNLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature Valid for six recentles.

REV DESCRIPTION

AT&T TEXAS/SWBT UTILITY LINES SHOWN

Ward, Getz & Associates, LLP TX FIRM No. F-9756 2500 Tanglewilde, Ste 120 Houston, Texas 77063 Voice: 713.789.1900 Contact:

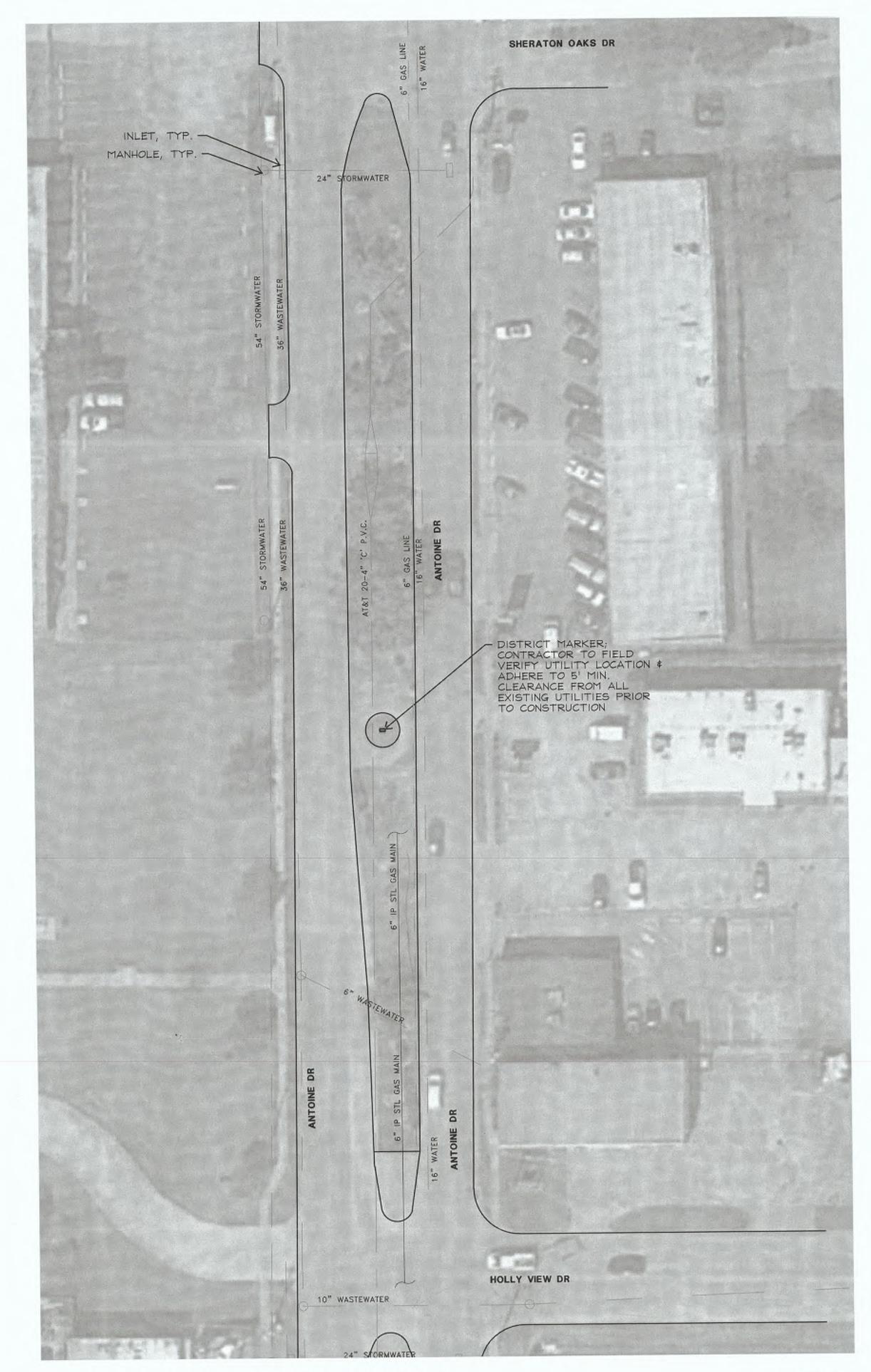
NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STORM WATER QUALITY

FILE NO:

DRAWING SCALE:

SHEET No. 4 OF 16



5 HOLLY VIEW AND ANTOINE DRIVE

SCALE: 1"=30"



INDSCA WENT	See
CENTERPOINT I	ENERGY
	ALL CENTERPOINT ENERGY AT 713-207-2222
NOTICE:	
e required by Yesas Law to call 811 at least ses can be marked. This Verification does r	48 hours before you dig not fulfill your obligation to call 811.
RIFICATION OF PRIVAT	E UTILITY LINES
nor	Date: 8/3/17
tural Gas Facilities Verification CNLY. that you have shown CNP Natural Gas lines not shown.) months.	correctly - not to be used for conflict verification.)
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X. U AT 84 Apperation for AT 8 T T	TEXAS/SWBT UTILITY	& 1 LINES SHO
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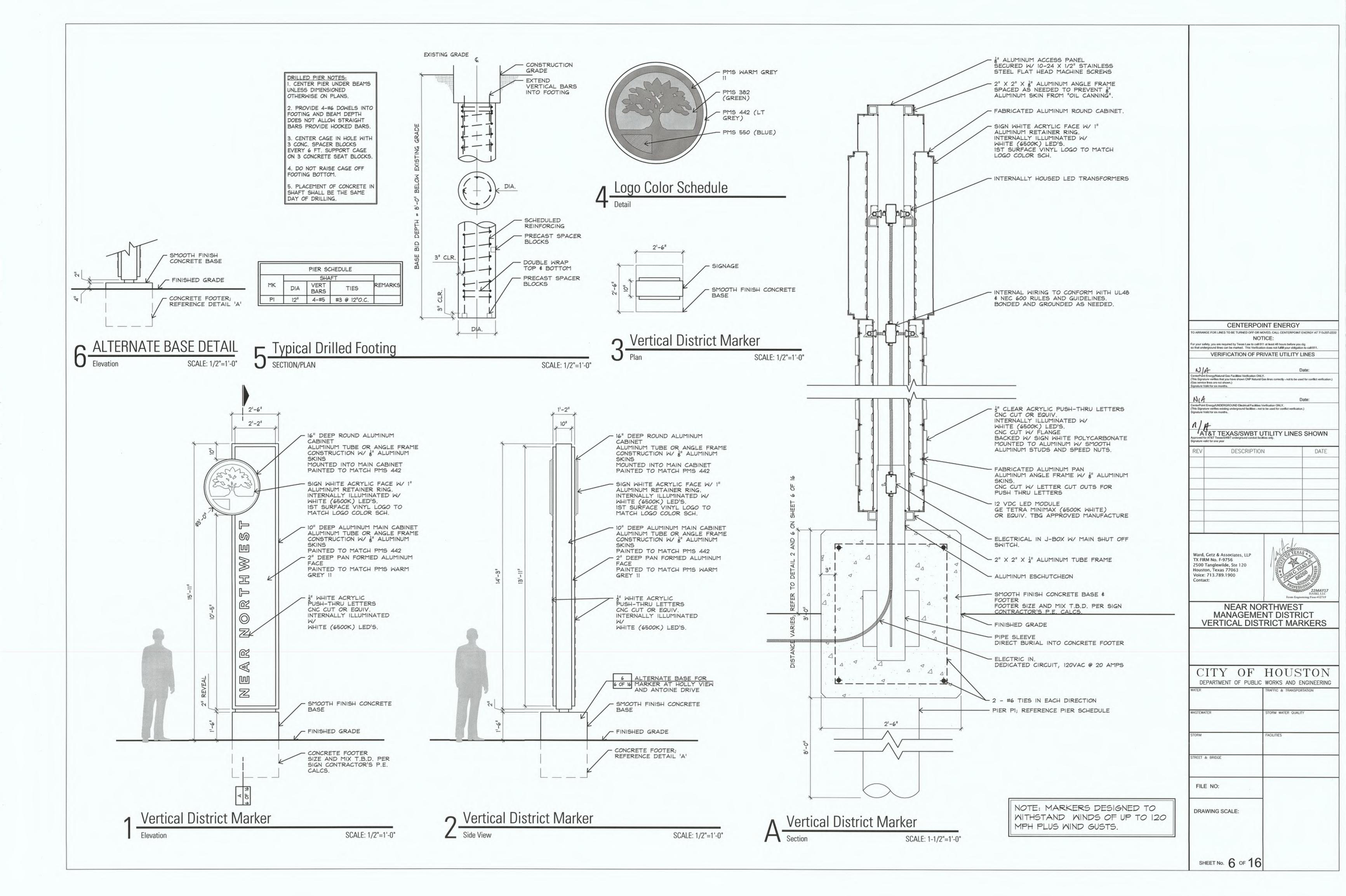
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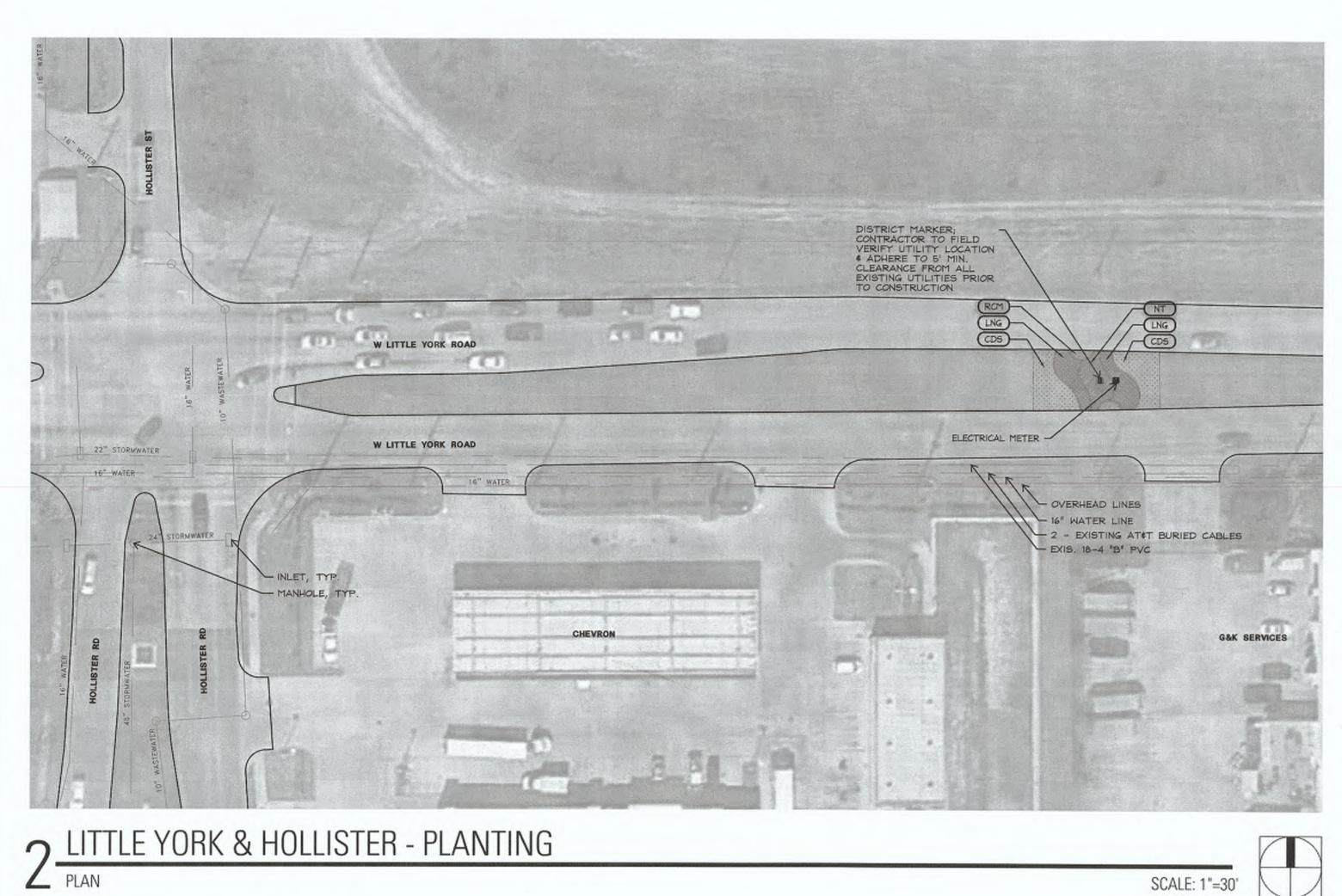
Ward, Getz & Associates, LLP TX FIRM No. F-9756 2500 Tanglewilde, Ste 120 Houston, Texas 77063 Voice: 713.789.1900 Contact:

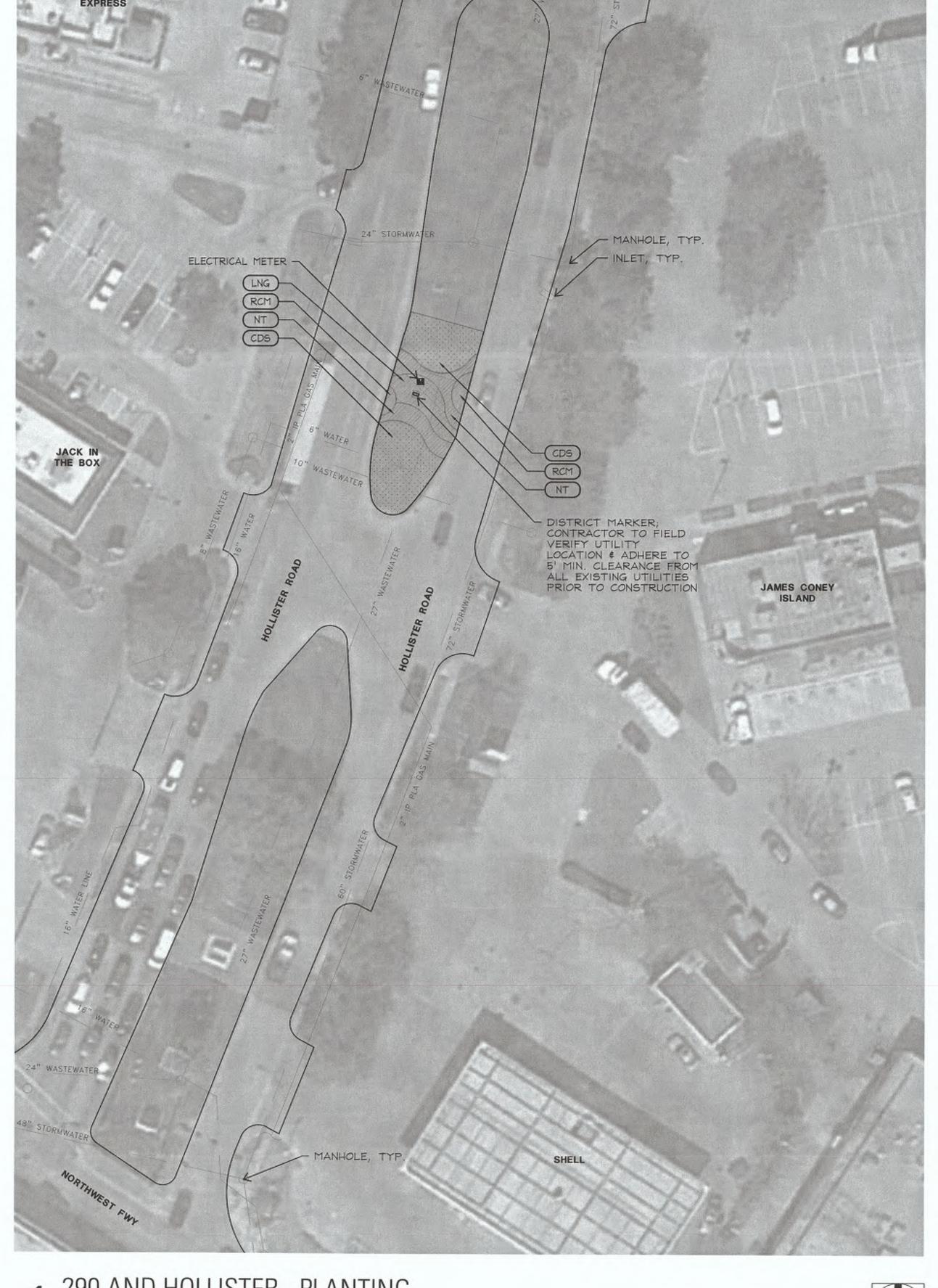
NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STREET & BRIDGE FILE NO: DRAWING SCALE: SHEET No. 5 OF 16







CENTERPOINT ENERGY RRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-222

or your safety, you are required by Texas Law to call 511 at least 48 hours before you dig a that underground lines can be marked. This Verification does not fulfill your obligation to call 511. VERIFICATION OF PRIVATE UTILITY LINES

AT&T TEXAS/SWBT UTILITY LINES SHOWN
Approved for AT&T Texas/SWBT underground conduit facilities only.

Strongung valid for one year

DESCRIPTION

Ward, Getz & Associates, LLP TX FIRM No. F-9756 2500 Tanglewilde, Ste 120 Houston, Texas 77063 Voice: 713.789.1900 Contact:

NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

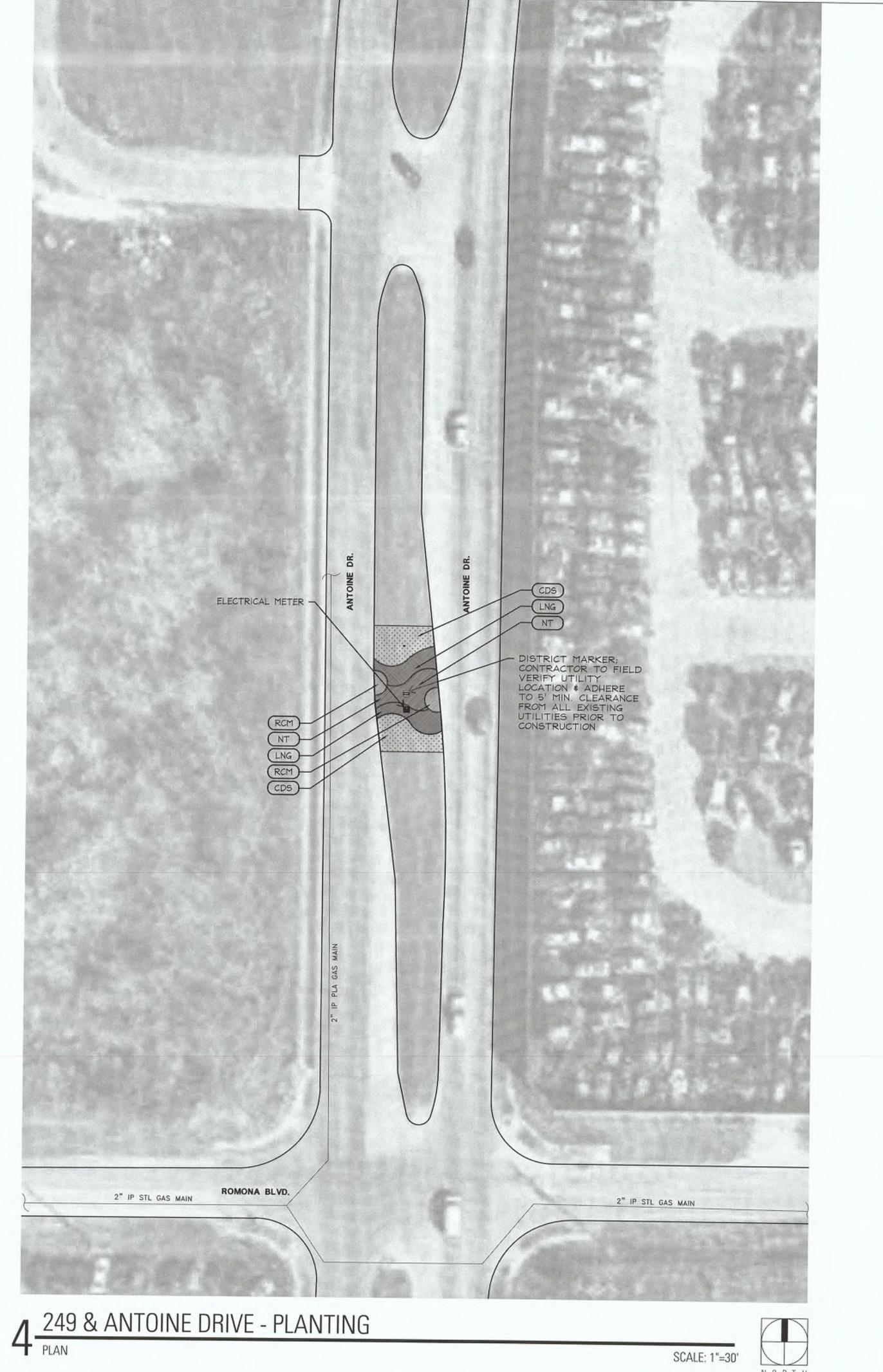
FILE NO:

NORTH

DRAWING SCALE:

290 AND HOLLISTER - PLANTING
PLAN SCALE: 1"=30'

SCALE: 1"=30"



GOONGA FOOD MART DISTRICT MARKER; CONTRACTOR TO FIELD VERIFY UTILITY LOCATION \$ ADHERE TO 5' MIN. CLEARANCE FROM ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION EL GRAND TACO ANDYS HARDWARE

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STORM WATER QUALITY REET & BRIDGE FILE NO: DRAWING SCALE: SHEET No. 8 OF 16

CENTERPOINT ENERGY ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

VERIFICATION OF PRIVATE UTILITY LINES

or your safety, you are required by Texas Law to call 811 at least 48 hours before you dig o that underground lines can be marked. This Verification does not fulfill your obligation to sail 811.

Center Point Energy/LINDERGROUND Electrical Facilities Verification QNLV.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature Valid for six months.

DESCRIPTION

Ward, Getz & Associates, LLP TX FIRM No. F-9756 2500 Tanglewilde, Ste 120 Houston, Texas 77063 Voice: 713.789.1900 Contact:

X. Chee 8-17-17
AT&T TEXAS/SWBT UTILITY LINES SHOWN

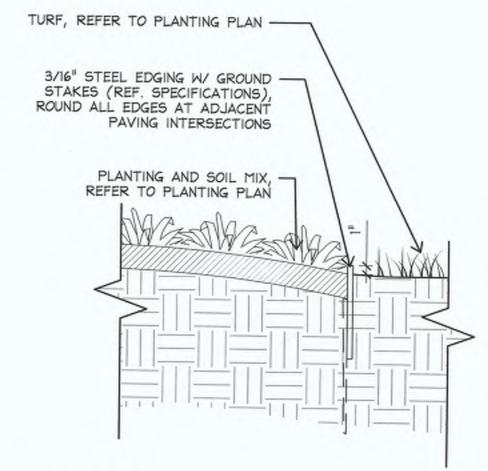
NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS

8-17-17

3 249 & N. HOUSTON ROSSLYN - PLANTING PLAN

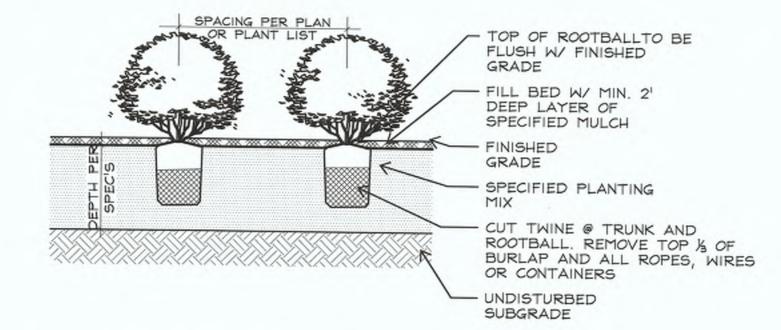
SCALE: 1"=30"

NORTH



3 STEEL EDGE SECTION

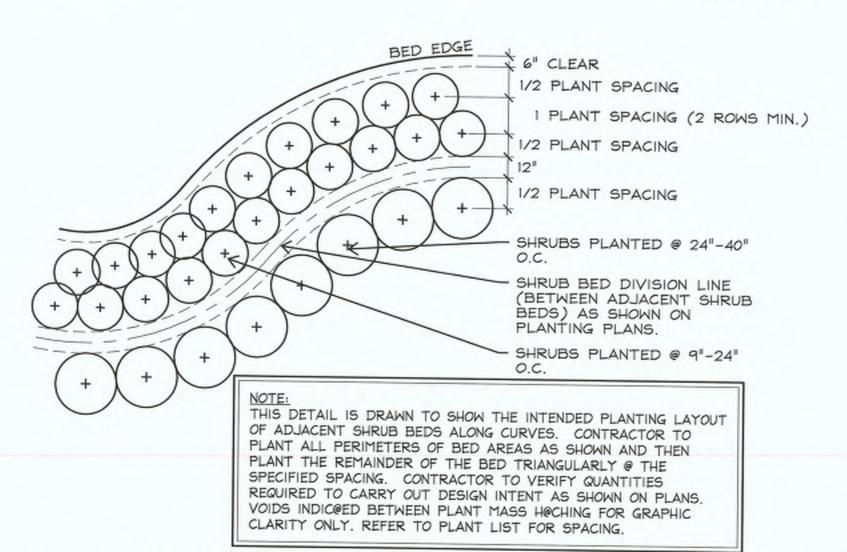
NOT TO SCALE



SHRUB PLANTING

NOT TO SCALE

NOT TO SCALE



GROUNDCOVER PLANTING

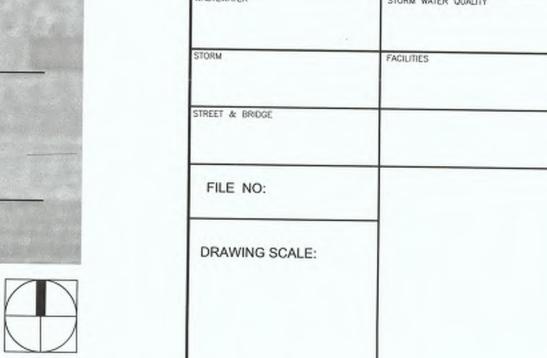
PLANT LIST PERENNIALS, GROUNDCOVERS, AND ANNUALS						
	(CDS)	COMMON BERMUDA	CYNODON DACTYLON	SOLID SOD	CONTRACTOR TO FEILD VERIFY QUANITIT OF SOD REQUIRED.	
	LNG	NEW GOLD LANTANA	LANTANA X 'NEW GOLD'	5 GAL., 12" HT. \$ SPRD. MIN	PLANT 24" O.C., FULL POT, GREEN	
	NT	MEXICAN FEATHER GRASS	NASSELLA TENUISSIMA	5 GAL., 18" HT. 6 SPRD. MIN.	FULL POT, GREEN, PLANT 24" O.C.	
	RCM	CINCO DE MAYO ROSE	ROSA CINCO DE MAYO	5 GAL., 24" HT. \$ SPRD. MIN.	PLANT 36" O.C., FULL POT, DARK GREEN FOLIAGE	



5 HOLLY VIEW AND ANTOINE DRIVE

NORTH

SCALE: 1"=30"



SHEET No. 9 OF 16

CENTERPOINT ENERGY

NOTICE:

VERIFICATION OF PRIVATE UTILITY LINES

enterPoint Energy/Natural Gas Facilities Verification CNI,Y, his Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) ion service lines are not shown.)

AT&T TEXAS/SWBT UTILITY LINES SHOWN
Approved for AT&T Texas/SWBT underground conduit facilities only.

NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TRAFFIC & TRANSPORTATION

or your safety, you are required by Texas Law to call 811 at least 48 hours before you dig othat underground lines can be marked. This Verification does not fulfill your obligation to call 811.

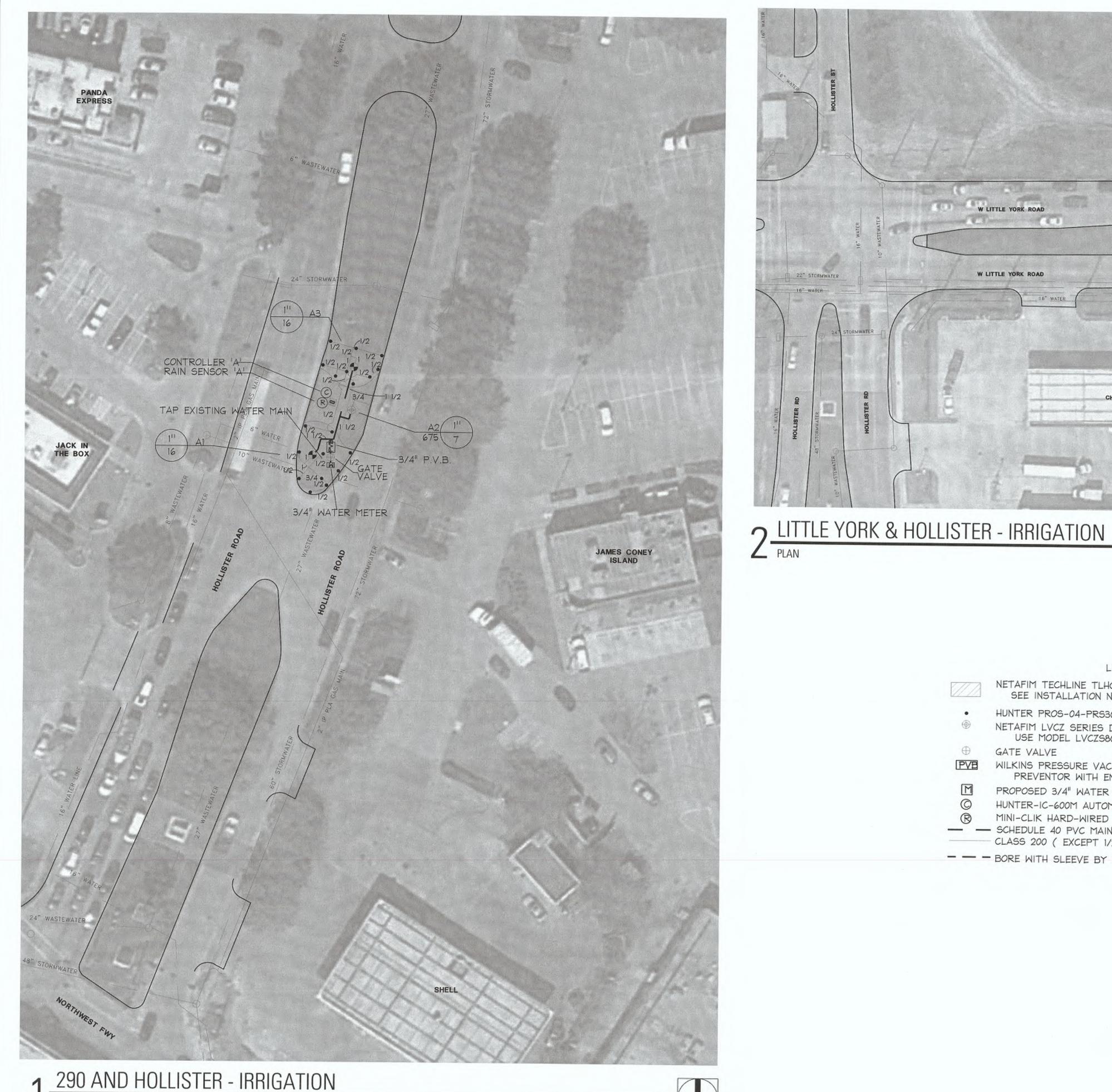
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
This Signature verifies existing underground facilities - not to be used for conflict verification.)
ignature Valid for six months.

DESCRIPTION

reture Valid for six months.

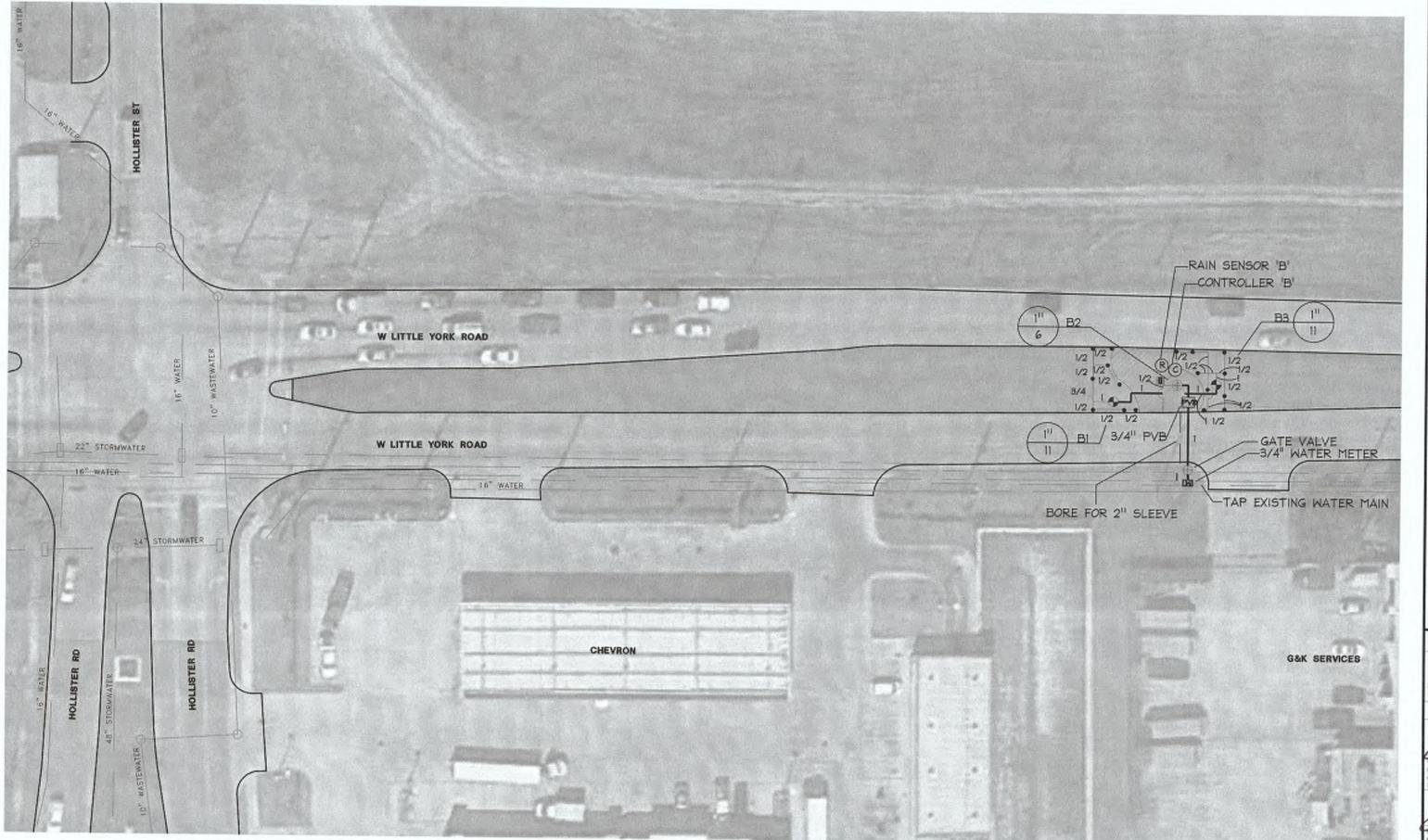
Ward, Getz & Associates, LLP TX FIRM No. F-9756 2500 Tanglewilde, Ste 120 Houston, Texas 77063 Voice: 713.789.1900

Contact:



SCALE: 1"=30"

PLAN



SCALE: 1"=30"

LEGEND

NETAFIM TECHLINE TLHCVXR5-12 SERIES DRIP TUBE IN SHRUB BED INSTALLED AT 2" DEPTH SEE INSTALLATION NOTE #6 REGARDING DRIP TUBE LAYOUT IN SHRUB BEDS.

HUNTER PROS-04-PRS30 SERIES POP UP SPRAY HEAD WITH PRO SPRAY SERIES NOZZLE AS NOTED BELOW NETAFIM LVCZ SERIES DRIP VALVE ASSEMBLY WITH 42 PSI REGULATOR AND 140 MESH FILTER USE MODEL LYCZS8010075-HF FOR DRIP ZONES WITH 5 TO 12 GPM FLOW RATE

⊕ GATE VALVE

PVE WILKINS PRESSURE VACUUM BREAKER TYPE BACKFLOW

PREVENTOR WITH ENCLOSURE, INSTALLED PER CITY CODE

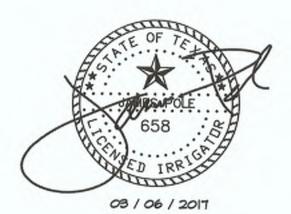
PROPOSED 3/4" WATER METER

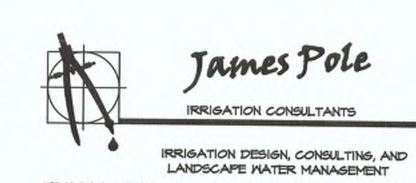
HUNTER-IC-600M AUTOMATIC CONTROLLER

MINI-CLIK HARD-WIRED RAIN SENSOR - SCHEDULE 40 PVC MAINLINE PIPE

CLASS 200 (EXCEPT 1/2 INCH #315) PVC LATERAL PIPE

- - BORE WITH SLEEVE BY L.I.C.





TEXAS L.I.C. #658 IOO N. LOCUST ST., SUITE 3 DENTON, TEXAS 76201 PHONE: 940.248.2864 FAX: 940.382.2475 jamese jamespoleirrigation.com



IRRIGATION IN TEXAS IS RESULATED BY THE TEXAS COMMISION ON ENVIRONMENTAL QUALITY (TCEQ.) (MC-I78.) P.O. BOX ISO87 T.C.E.Q.'S WEB SITE IS: WWW.TCEQ.STATE.TXJIS

CENTERPOINT ENERGY NOTICE: VERIFICATION OF PRIVATE UTILITY LINES

AT&T TEXAS/SWBT UTILITY LINES SHOWN 2-27-18

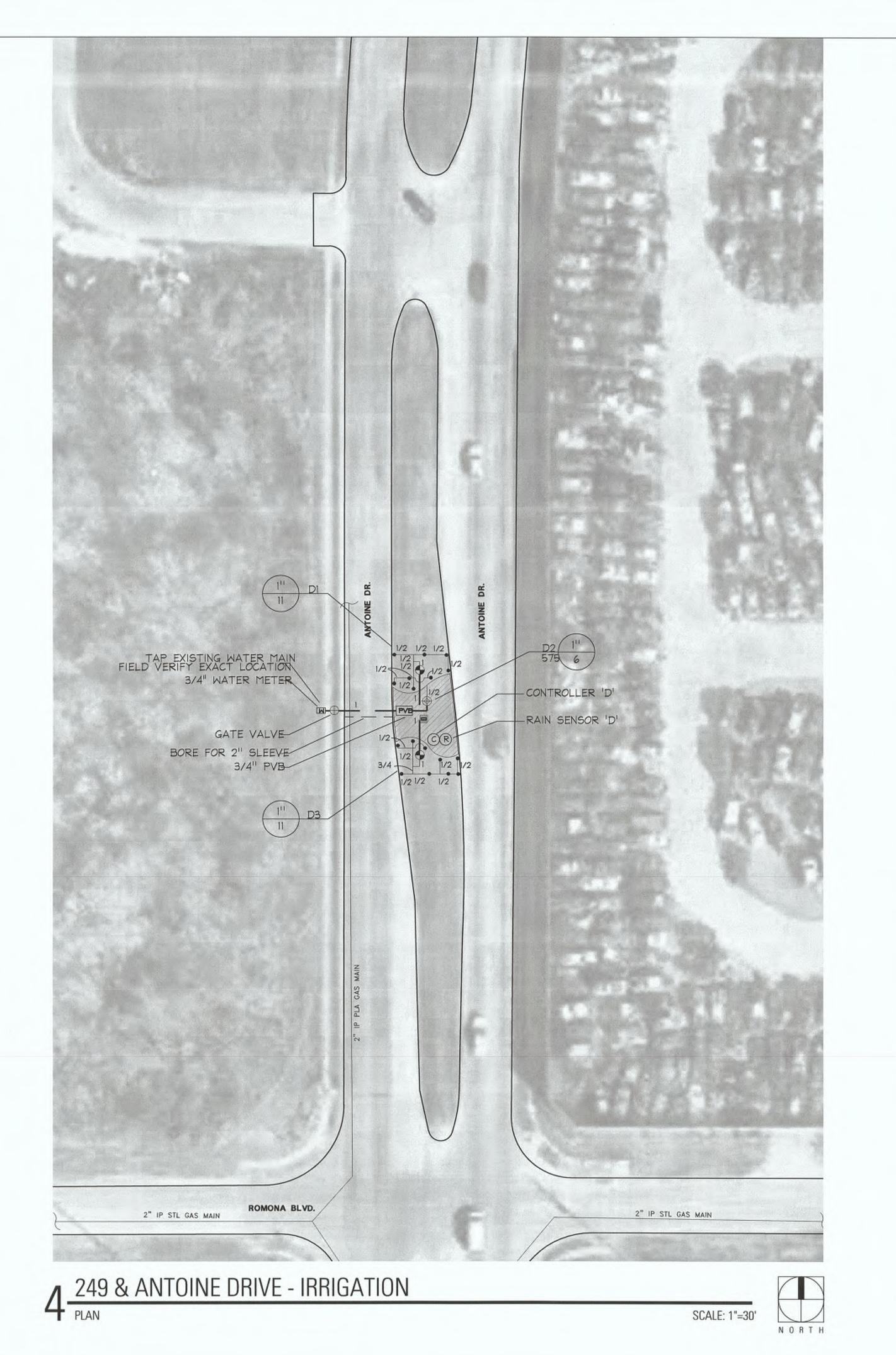
DESCRIPTION

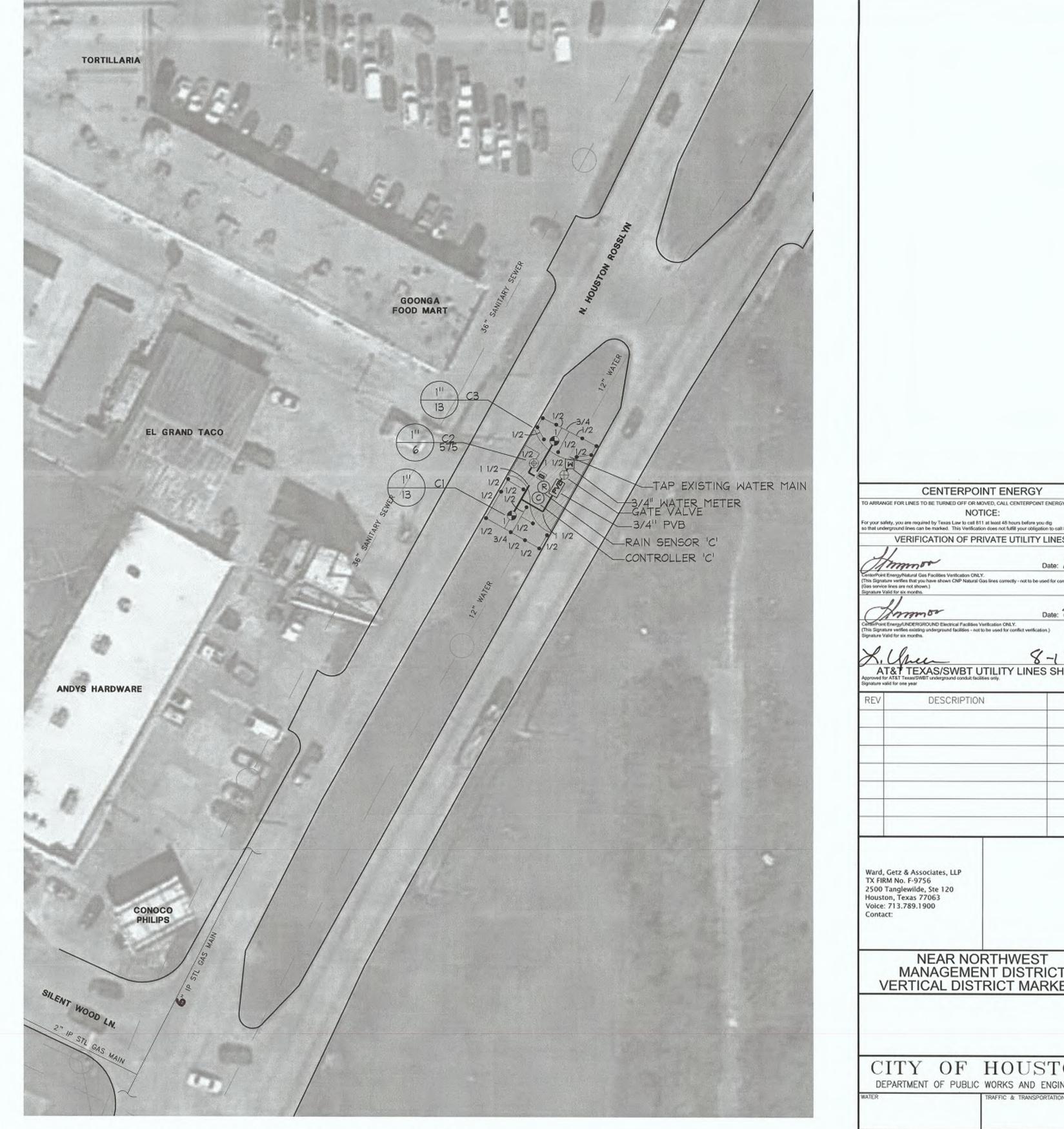
Ward, Getz & Associates, LLP TX FIRM No. F-9756 2500 Tanglewilde, Ste 120 Houston, Texas 77063 Voice: 713.789.1900 Contact:

> NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS

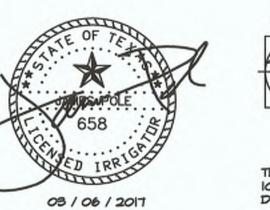
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING REET & BRIDGE FILE NO: DRAWING SCALE:

SHEET No. 10of 16





3 249 & N. HOUSTON ROSSLYN - IRRIGATION PLAN





IRRIGATION DESIGN, CONSULTING, AND LANDSCAPE WATER MANAGEMENT TEXAS L.I.C. #650 IOO N. LOCUST ST., SUITE 8 DENTON, TEXAS 1620 PHONE: 940.243.2364 FAX: 940.382.2475 james@jamespoleirrigation.com



IRRIGATION IN TEXAS IS RESULATED BY THE TEXAS COMMISION ON ENVIRONMENTAL QUALITY (TCEQ) (MC-178) P.O. BOX ISO87 T.C.E.Q.'S MEB SITE IS: WWALTCEQ.STATE.TXUS

SCALE: 1"=30"

Ward, Getz & Associates, LLP TX FIRM No. F-9756 2500 Tanglewilde, Ste 120 Houston, Texas 77063 Voice: 713.789.1900 Contact: NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING TORM WATER QUALITY

TREET & BRIDGE

FILE NO:

DRAWING SCALE:

SHEET No. 110F16

CENTERPOINT ENERGY

VERIFICATION OF PRIVATE UTILITY LINES

Center Point Energy/Natural Clas Facilities Verification CNLY.

[This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for certifict verification.)

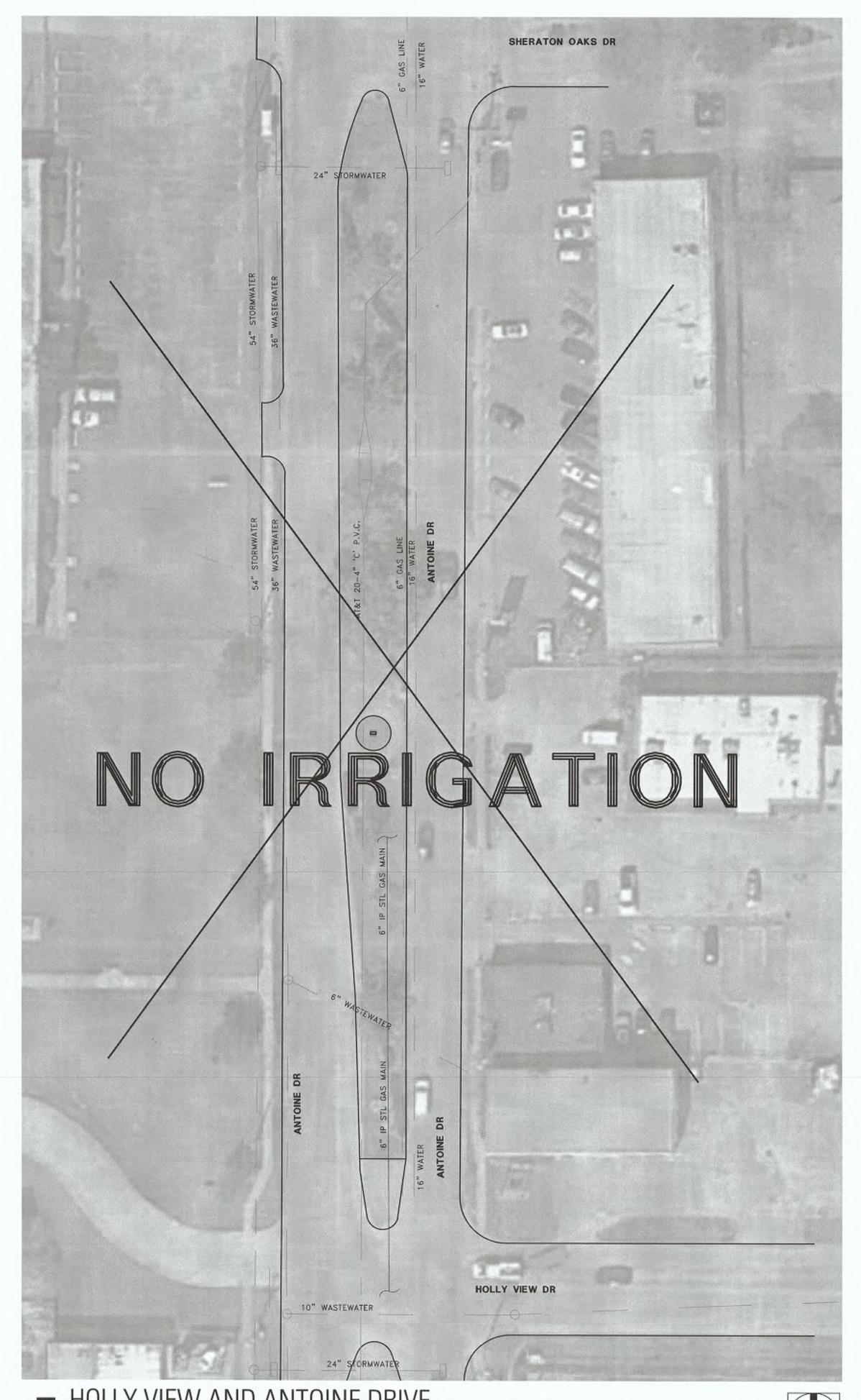
[Gas service lines are not shown.]

Signature Valid for ex months.

X. Green 8-17-17
AT&F TEXAS/SWBT UTILITY LINES SHOWN

DESCRIPTION

ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222 NOTICE: your safety, you are required by Texas Law to call 611 at least 48 hours before you dig hat underground lines can be marked. This Verification does not fulfill your obligation to call 811.



5 HOLLY VIEW AND ANTOINE DRIVE

SCALE: 1"=30"

For your safety, you are required by Teace Line to call 811 at least 45 hours before you dig to the distribution of the techniques of the safety of th

STORM WATER QUALITY

TREET & BRIDGE

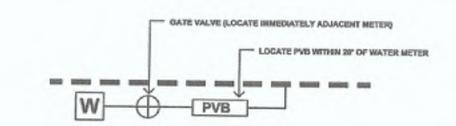
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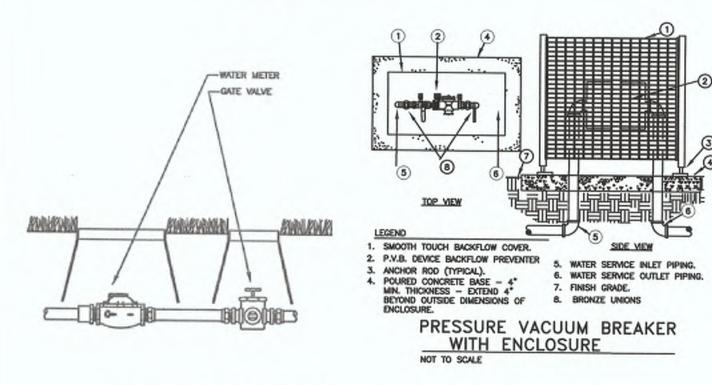
SHEET No. 120F 16

CENTERPOINT ENERGY

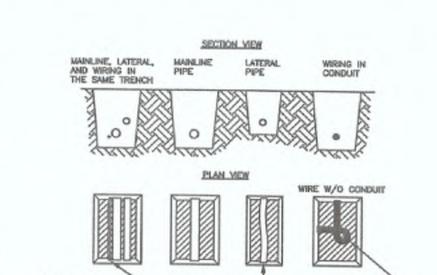
2. CONFIRM MINIMUM STATIC WATER PRESSURE OF 60 PSI AT THE HIGHEST ELEVATION OF THE SYSTEM LIMITS, AND 1,000' MAXIMUM DISTANCE (MEASURED FROM FARTHEST DISTANCE OF IRRIGATED LANDSCA "INSTALL GATE VALVE EACH SIDE OF ESPLANADE TIP 3. LATERAL PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES. MAINLINE PIPE AND WIRES SHALL BE INSTALLED BORE OR SLIEVE LOCATION (MAXIMUM OF 3 PER MAINLINE) 1" METER MAXIMUM, MUST BE LOCATED IN ESPLANADE. 4. CONTRACTOR IS TO CONTACT APPROPRIATE AUTHORITIES AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. TYPICAL LATERAL IRRIGATION ZONE 5. THE PROPOSED LOCATIONS OF ALL ABOVE- GROUND EQUIPMENT INCLUDING BACKFLOW PREVENTORS, CONTROLLERS TYPICAL ESPLANADE IRRIGATION PLAN



TYPICAL CONNECTION NOT TO SCALE



METER/PVB CONNECTION



PIPE & WIRE TRENCHING

TIE A 24-INCH LOOP IN-

AUTOMATIC CONTROLLER
AS SPECIFIED

- MOUNT CONTROLLER TO BACK SIDE OF METER BASE PEDESTAL

IRRIGATION SYSTEM NOTES:

1. IRRIGATION SYSTEM MUST BE "CLOSED LOOP" AND MAY NOT INCLUDE QUICK-COUPLERS, HOSE BIBS OR ANY OTHER DEVICE THAT WOULD ALLOW EXTRACTION OF WATER THROUGH THE SYSTEM OTHER THAN A SPRINKLER HEAD OR EMITTER

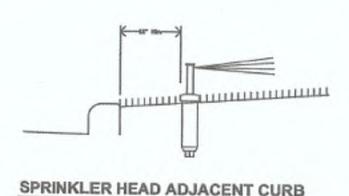
2. WATERING IS PROHIBITED BETWEEN THE HOURS OF 10:00 AM & 7:00 PM

3. ABOVE-GROUND SPRINKLERS ARE NOT PERMITTED ON ESPLANADES LESS THAN 12'

4. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION & STAKING OF ALL UNDERGROUND 5. SYSTEM MUST BE OPERATED BY AN AUTOMATIC CONTROLLER UTILIZING A RAIN SHUT-OFF SENSOR DEVICE

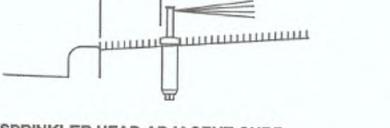
6. THE WATER METER, CONTROLLER AND RAIN SENSOR MUST BE LOCATED WITHIN THE

7. ONE METER PER 1,000 FEET CONTINUOUS RUN OF ESPLANADES. NO INTERSECTIONS.



SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH CLASS 200 PVC TWCE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
 FOR PIPE AND WIRE BURIAL DEPTHS SEE SPECIFICATIONS.

RUN WIRING BENEATH-



MANUAL LINE FLUSHING VALVE PLUMBED TO PVC OR POLY

-PVC OR POLY EXHAUST HEADER

-PVC OR POLY SUPPLY HEADER

-AREA PERIMETER

-DRIP LINE

SUPPLY AND EXHAUST HEADERS SHALL BE CLASS 200 PVC PIPE, OF THE SAME DIAMETER AS THE ZONE VALVE SIZE. USE DRIP TUBE FOR SUPPLY AND EXHAUST HEADERS ON GRIDS WITH FLOW SMALLER THAN 5 GPM ONLY.

DRIP CENTER FEED LAYOUT

NETAFIM TECHLINE TLHCVXR5-12 SERIES DRIP TUBE IN SHRUB BED INSTALLED AT 2" DEPTH SEE INSTALLATION NOTE #6 REGARDING DRIP TUBE LAYOUT IN SHRUB BEDS.

IRRIGATION GUIDELINES

ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER.

ADDRESSED BEFORE ANY CONSTRUCTION BEGINS.

PROCEED UNTIL DIRECTED BY THE LANDSCAPE ARCHITECT.

OWNER'S REPRESENTATIVE BEFORE THESE ITEMS ARE INSTALLED.

L.I.C. TO PROVIDE FINAL HARD-WIRE CONNECTION TO THE CONTROLLER.

NUMBER OF HEADS WHEN NEEDED, WITH NO ADDITIONAL COST TO THE OWNER.

1. COORDINATE IRRIGATION INSTALLATION WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE

COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO

THE IRRIGATION CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE MANDATED IRRIGATION ORDINANCES AND CODES, AND WILL SECURE ALL REQUIRED PERMITS. L.I.C. SHALL PAY ANY ASSOCIATED FEES UNLESS OTHERWISE NOTED. ALL LOCAL CODES SHALL PREVAIL OVER ANY DISCREPANCIES HEREIN AND SHALL BE

MAXIMUM STATIC WATER PRESSURE OF 90 P.S.I. AT THE LOWEST ELEVATION OF THE SYSTEM LIMITS AT LEAST 7 DAYS BEFORE BEGINNING WORK. IF STATIC WATER PRESSURE IS OUTSIDE THE RANGE STATED ABOVE, DO NOT

AT A MINIMUM DEPTH OF 18 INCHES. NO MACHINE TRENCHING SHALL BE PERMITTED WITHIN EXISTING TREE ROOT ZONES.

WHEN HAND - TRENCHING WITHIN EXISTING TREE ROOT ZONES, NO ROOTS LARGER THAN I" DIAMETER SHALL BE CUT.

AND WEATHER SENSORS SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR

6. WHERE SHOWN ON THE PLANS, MASS SHRUB / GROUNDCOVER BEDS SHALL INCLUDE NETAFIM TECHLINE TLHCVXR SERIES

SECURELY STAKED EVERY 18". NETAFIM #TL050MFV-1 FLUSH VALVES SHALL BE INSTALLED AT THE FARTHEST

TLCV IN-LINE CHECK VALVES FOR EVERY 4.5 FEET OF DRIP LINE ELEVATION CHANGE WITHIN THE ZONE. USE

8. ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12" MINIMUM LENGTH OF 1/2" FLEX PVC. THE FLEX PVC SHALL

9. ALL HEADS SHALL BE INSTALLED A MINIMUM OF 12" FROM PAVEMENT EDGES. FINAL HEAD ADJUSTMENTS BY THE

CONTRACTOR SHALL INCLUDE THE ADDITION OF CHECK VALVES WHERE NEEDED TO PREVENT EXCESSIVE LOW HEAD

BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #795 SOLVENT AND #P-70 PRIMER.

DRAINAGE. THE CONTRACTOR SHALL BUDGET FOR, AND INSTALL CHECK VALVES FOR UP TO 10% OF THE TOTAL

7. ELECTRIC POWER SHALL BE PROVIDED AT THE CONTROLLER LOCATION BY GENERAL CONTRACTOR.

POINTS FROM THE ZONE VALVE. USE 17 MM BARBED FITTINGS FOR DRIP LINE CONNECTIONS, SET THE MAXIMUM OPERATING PRESSURE AT 30 PSI. TECHLINE CV SHALL BE INSTALLED PERPENDICULAR TO SLOPE FACE. INSTALL

BE INSTALLED 10" DEEP. DRIP TUBE SHALL BE SET 2" BELOW FINISHED SOIL GRADE (NOT INCLUDING MULCH LAYER),

NETAFIM STAPLES (#TLS6) TO SECURE TUBING EVERY 18" EACH DRIP ZONE SHALL INCLUDE ONE MAINTENANCE "FLAG"

SHALL BE CONNECTED TO THE DRIP ZONE PIPE, SET FLUSH WITH GRADE, AND LOCATED AT THE FARTHERST DISTANCE FROM

THE DRIP VALVE ASSEMBLY. INSTALL THE "FLAG" HEAD ADJACENT TO EDGING OR IN LOW PLANTINGS FOR EASE OF VIEWING.

WHICH SHALL CONSIST OF A 12" POP-UP SPRAY HEAD AND COMPLETELY CLOSED SPRAY NOZZLE. THE POP-UP HEAD

DRIP TUBE WITH PRE-INSTALLED .55 GPH DRIP EMITTERS AT 12" INTERVALS (TLHCVXR5-12), INSTALLED IN CENTER-FED GRIDS

WITH ROWS SPACED 18" APART. INDIVIDUAL DRIP TUBE RUNS SHALL NOT EXCEED 150 L.F. PVC LATERAL "TRUNK" LINES SHALL

HUNTER PROS-04-PRS30 SERIES POP UP SPRAY HEAD WITH PRO SPRAY SERIES NOZZLE AS NOTED BELOW NETAFIM LVCZ SERIES DRIP VALVE ASSEMBLY WITH 42 PSI REGULATOR AND 140 MESH FILTER

GATE VALVE

FLOW IN G.P.M.

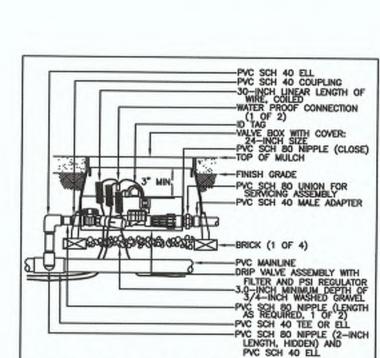
APPROX. LINEAR

FOOTAGE OF DRIP TUBE

WILKINS PRESSURE VACUUM BREAKER TYPE BACKFLOW PREVENTOR WITH ENCLOSURE, INSTALLED PER CITY CODE

MINI-CLIK HARD-WIRED RAIN SENSOR

- - BORE WITH SLEEVE BY L.I.C.



DRIP VALVE, FILTER, REGULATOR

MANUAL LINE FLUSH VALVE

DRIP TUBE

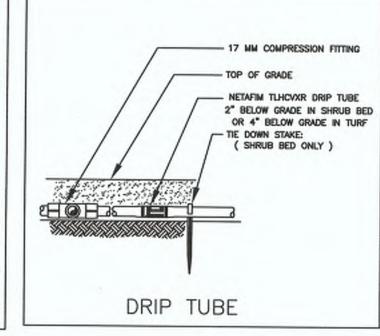
FINISH GRADE

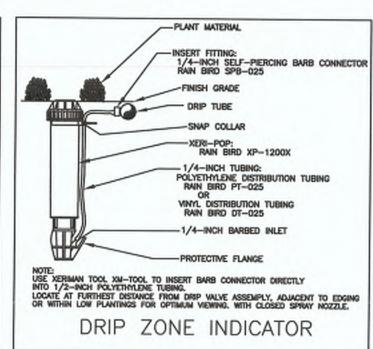
VALVE BOX SEE SPECS.

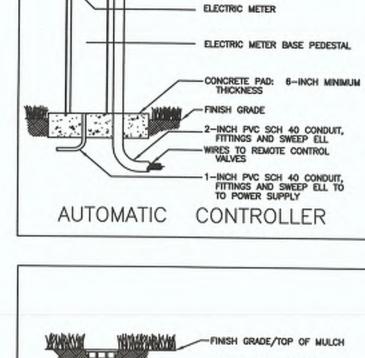
UNE FLUSHING VALVE TLSOV

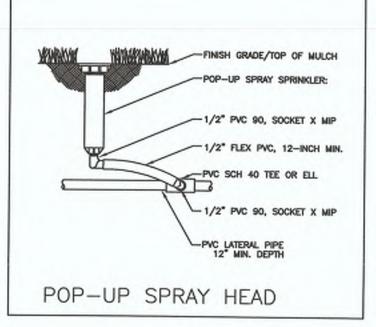
BRICK SUPPORTS -(THREE)

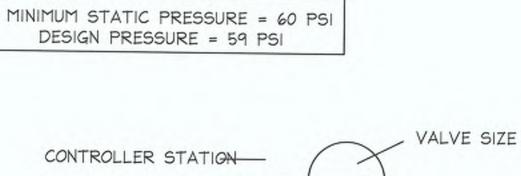
3/4" GRAVEL SUMP :-

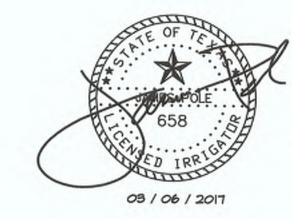








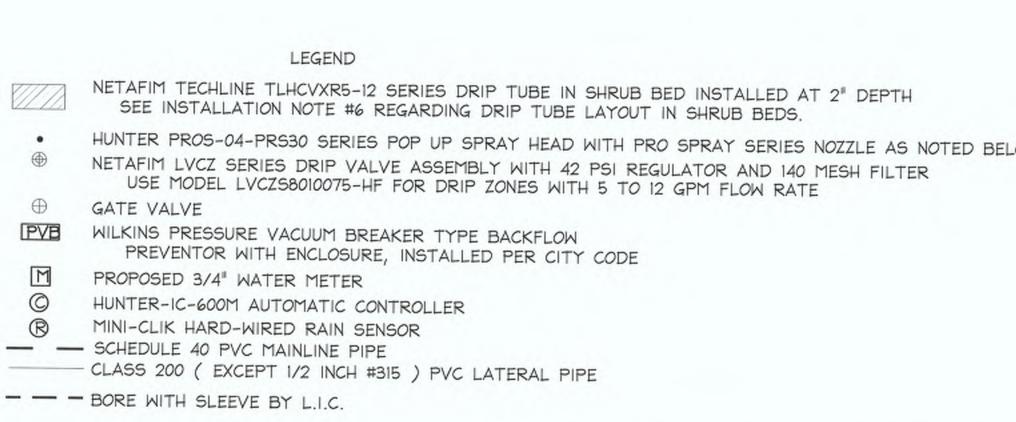




43.2364 82.2475 tion.com



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TE OF TE		nes Pole ION CONSULTANTS
03 / 06 / 2017	IRRIGATION : LANDSCAPE TEXAS L.I.C. #658 IOO N. LOCUST ST., SUITE 3 DENTON, TEXAS 76201	DESIGN, CONSULTING, AND E WATER MANAGEMENT PHONE: 940.24 FAX: 940.38 Jamese Jamespoleirrigat

DRAWING SCALE: SHEET No. 130F 16

CENTERPOINT ENERGY

NOTICE:

VERIFICATION OF PRIVATE UTILITY LINES

Cente/Point Energy/Natural Gas Facilities Varification CNLY.
(This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.
(Gas service lines are not shown.)

AT&T TEXAS/SWBT UTILITY LINES SHOWN

NEAR NORTHWEST

MANAGEMENT DISTRICT

VERTICAL DISTRICT MARKERS

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DATE

CenterPoint Energy/LNDERGROUND Electrical Facilities Verification ONLY, (This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature Valid for six months.

DESCRIPTION

lignature Velid for six months.

Ward, Getz & Associates, LLP TX FIRM No. F-9756

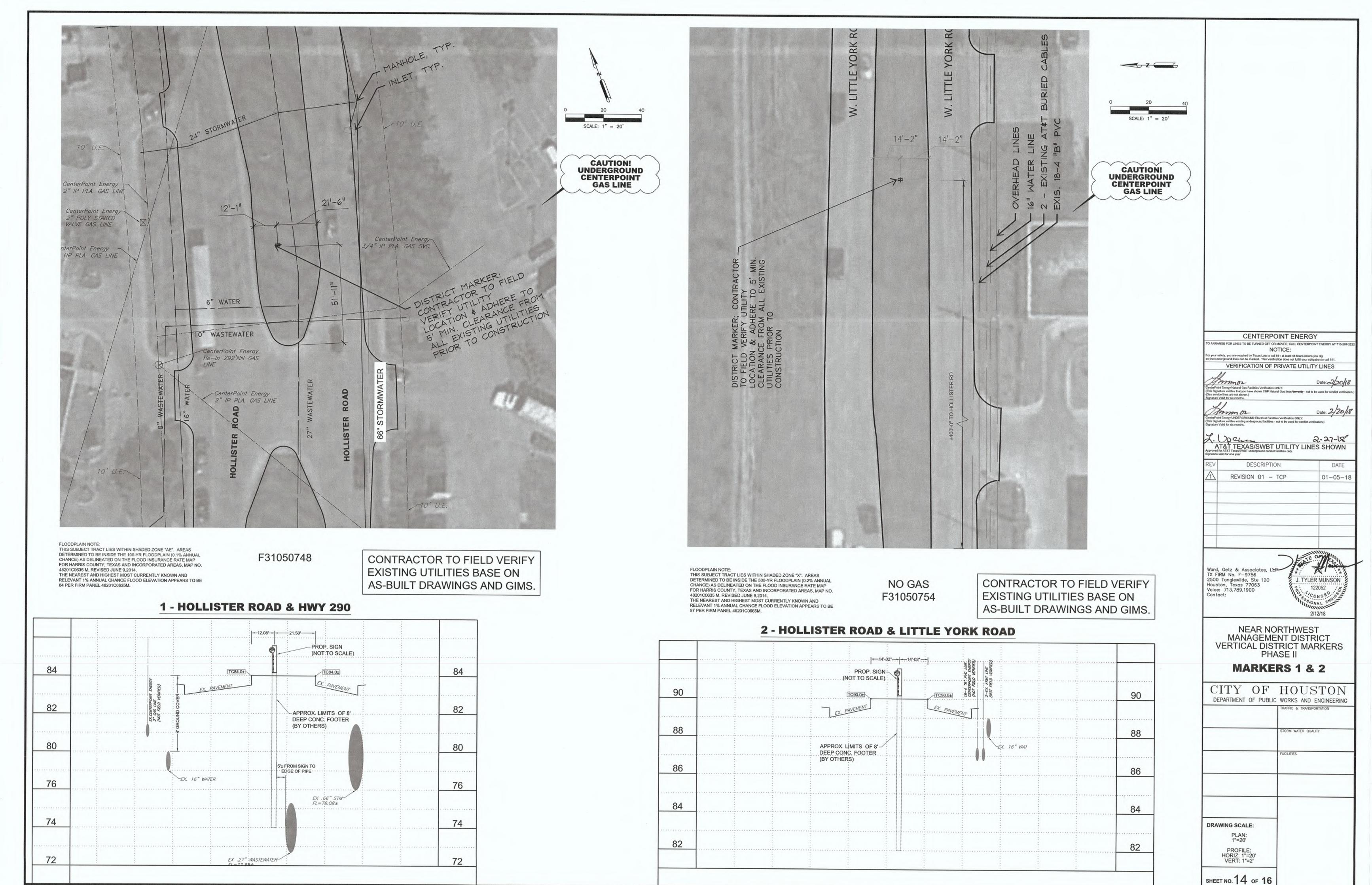
2500 Tanglewilde, Ste 120 Houston, Texas 77063

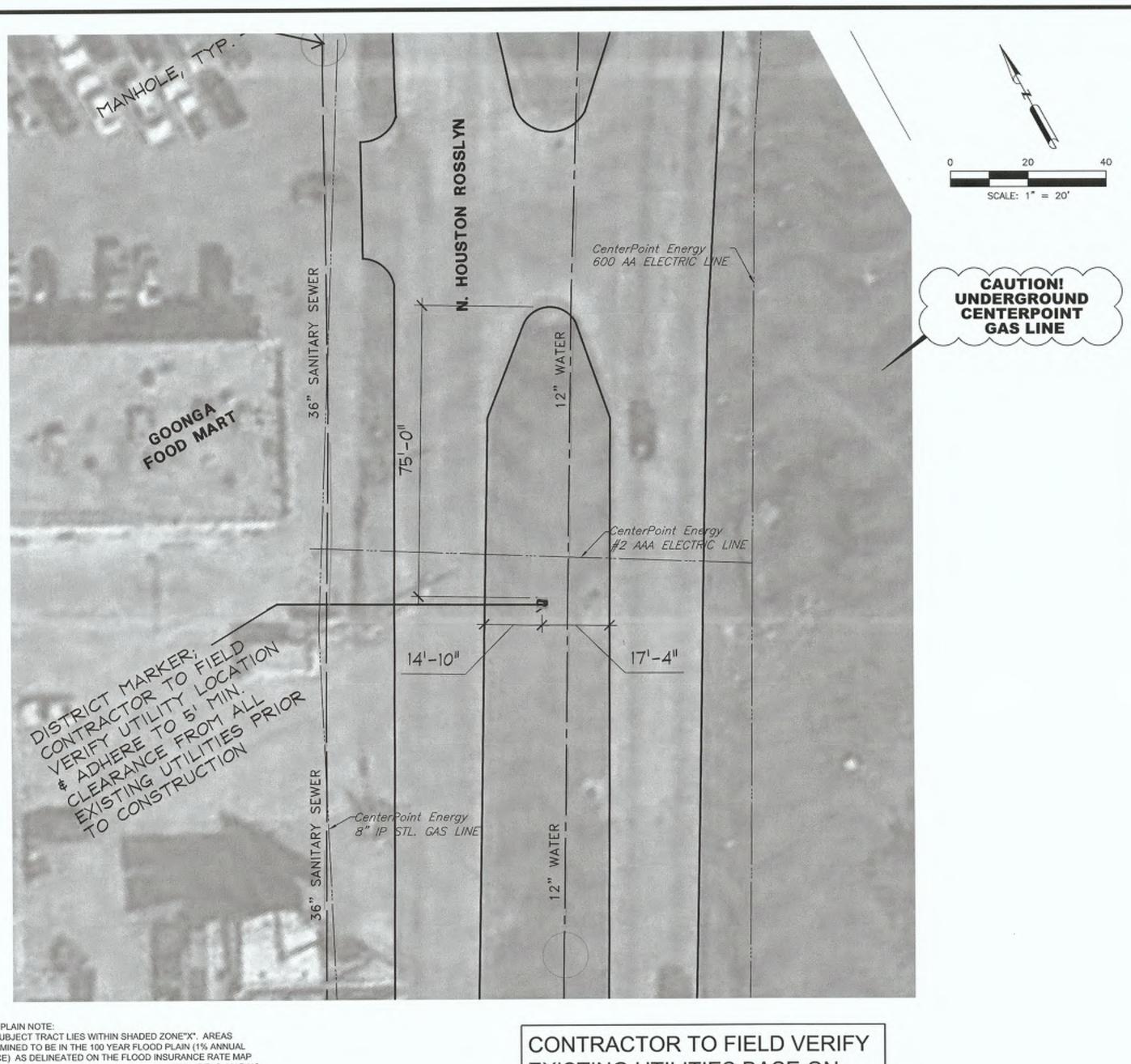
Voice: 713.789.1900

REET & BRIDGE

FILE NO:

your safety, you are required by Texas Law to call \$11 at least 48 hours before you dig hat underground lines can be marked. This Verification does not fulfill your obligation to call \$1:

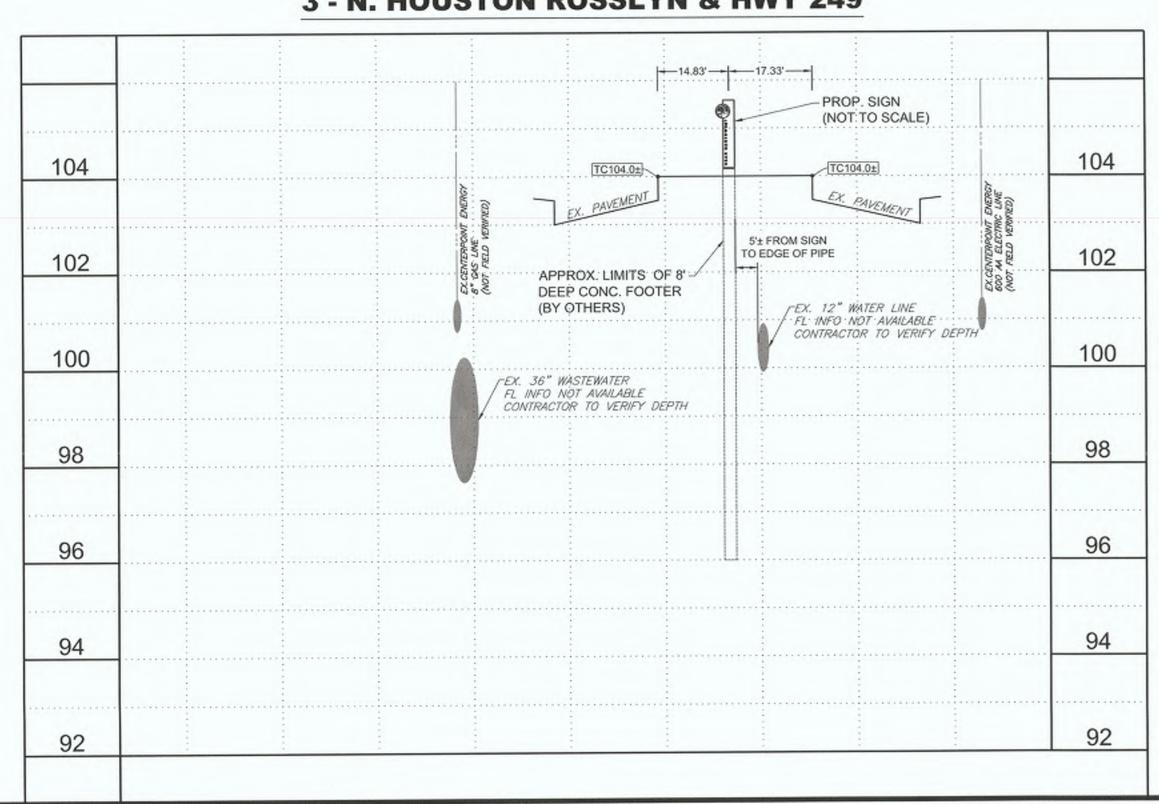


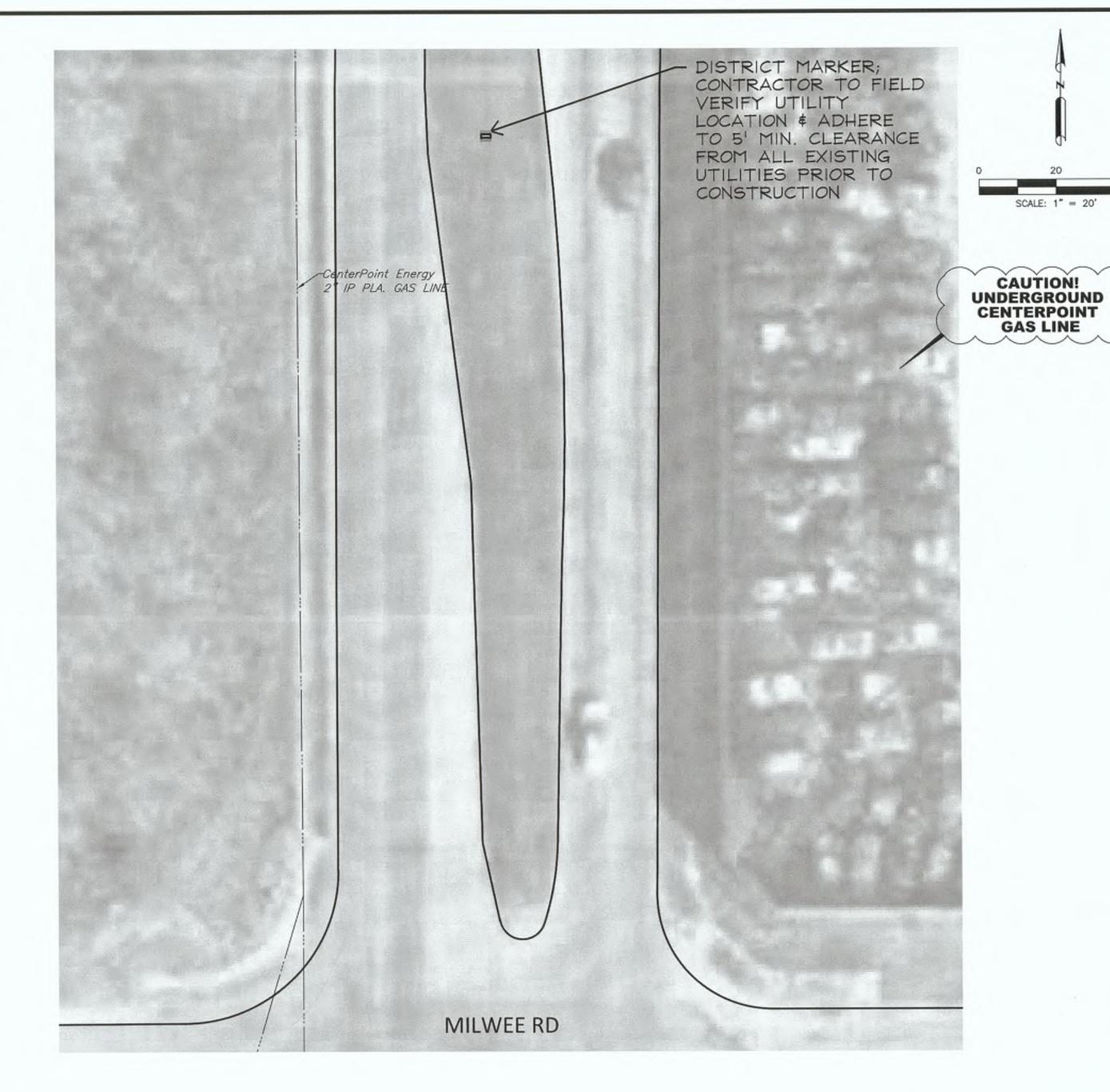


FLOODPLAIN NOTE: THIS SUBJECT TRACT LIES WITHIN SHADED ZONE"X". AREAS DETERMINED TO BE IN THE 100 YEAR FLOOD PLAIN (1% ANNUAL CHANCE) AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR HARRIS COUNTY, TEXAS AND INCORPORATED AREAS, MAP NO. 48201C0465 M, REVISED JUNE 9,2014.

EXISTING UTILITIES BASE ON AS-BUILT DRAWINGS AND GIMS.

3 - N. HOUSTON ROSSLYN & HWY 249

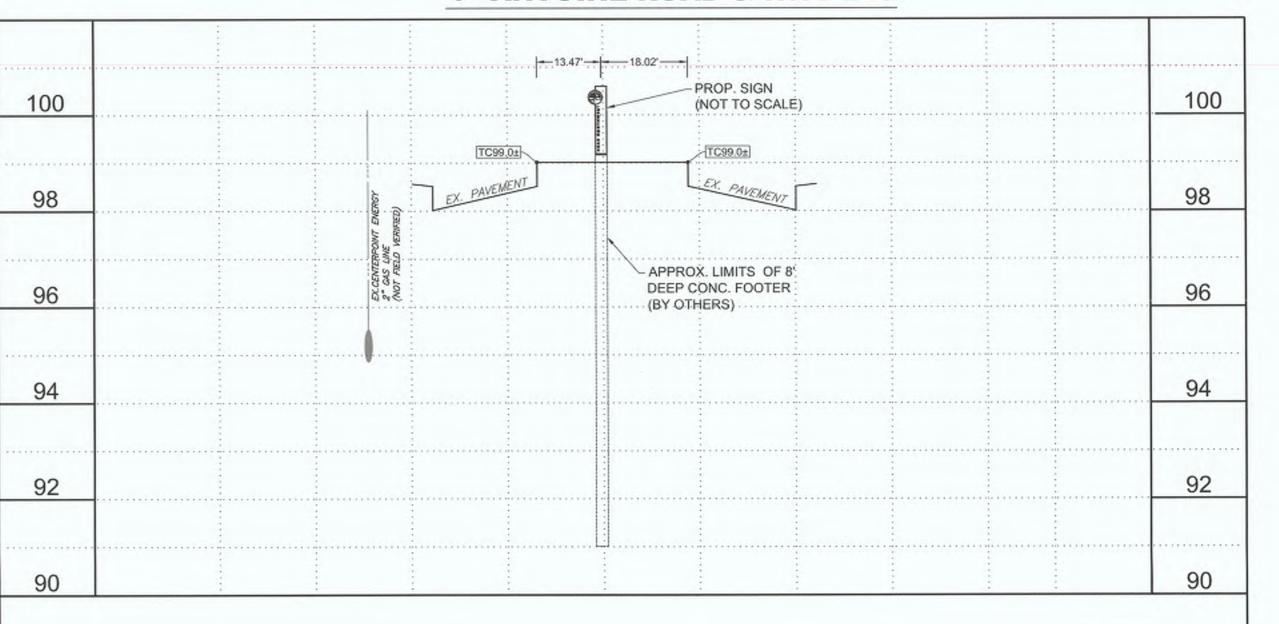




THIS SUBJECT TRACT LIES WITHIN SHADED ZONE "X". AREAS DETERMINED TO BE INSIDE THE 500-YR FLOODPLAIN (0.2% ANNUAL CHANCE) AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR HARRIS COUNTY, TEXAS AND INCORPORATED AREAS, MAP NO. 48201C0655 M, REVISED JUNE 9,2014. THE NEAREST AND HIGHEST MOST CURRENTLY KNOWN AND RELEVANT 1% ANNUAL CHANCE FLOOD ELEVATION APPEARS TO BE 68 PER FIRM PANEL 48201C0655M.

CONTRACTOR TO FIELD VERIFY EXISTING UTILITIES BASE ON AS-BUILT DRAWINGS AND GIMS.

4 - ANTOINE ROAD & HWY 249



Ward, Getz & Associates, LLP TX FIRM No. F-9756 J. TYLER MUNSON 2500 Tanglewilde, Ste 120

Houston, Texas 77063

Voice: 713.789.1900

Contact:

NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS PHASE II

122052

CENTERPOINT ENERGY

VERIFICATION OF PRIVATE UTILITY LINES

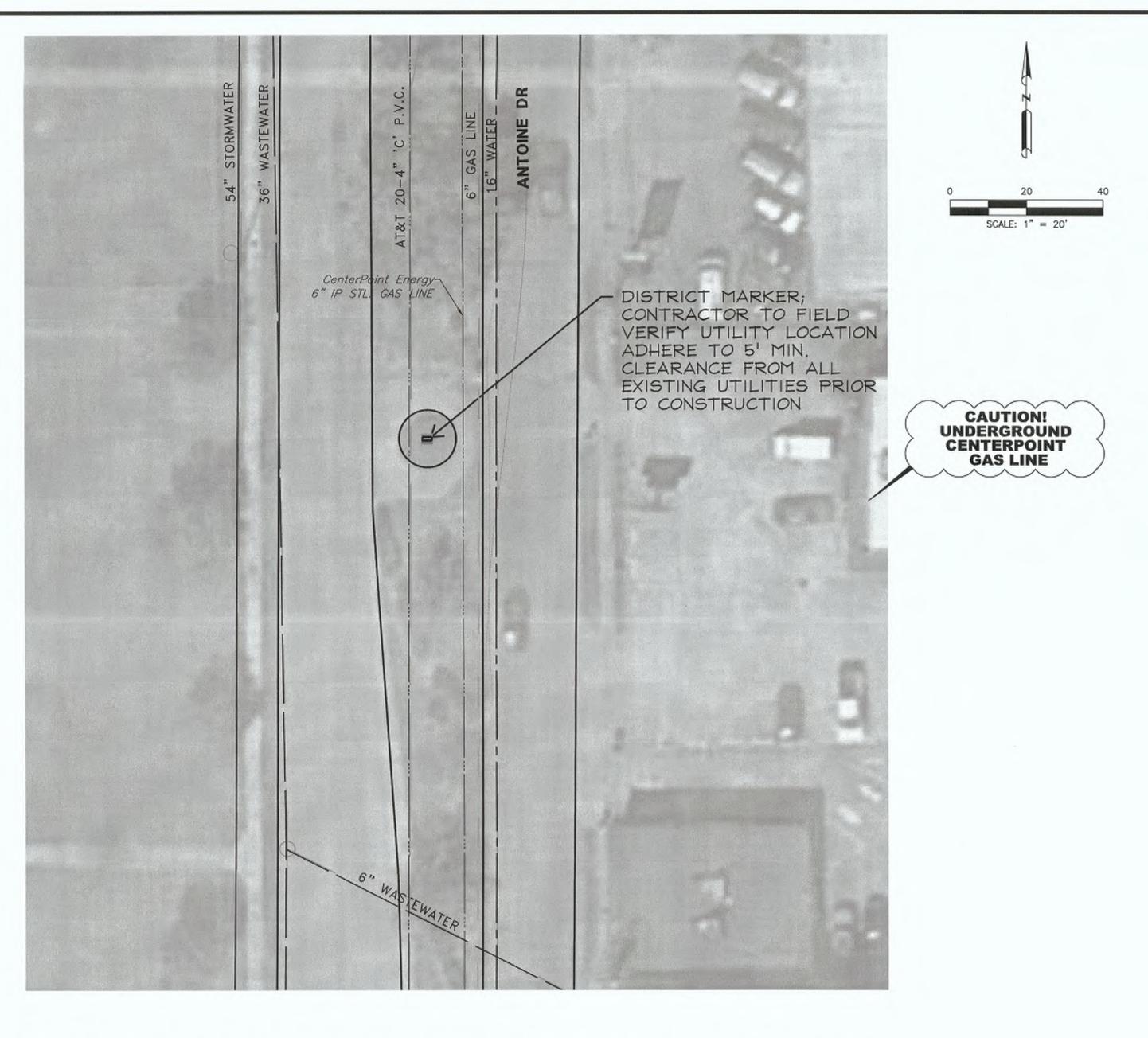
AT&T FEXAS/SWBT UTILITY LINES SHOWN

DESCRIPTION

your safety, you are required by Texas Law to call \$11 of least 48 hours before you dig at underground lines can be marked. This Verification does not fulfill your obligation to call \$11.

MARKERS 3 & 4

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING TORM WATER QUALITY DRAWING SCALE: PLAN: 1"=20" PROFILE: HORIZ: 1"=20" VERT: 1"=2" SHEET NO. 15 OF 16

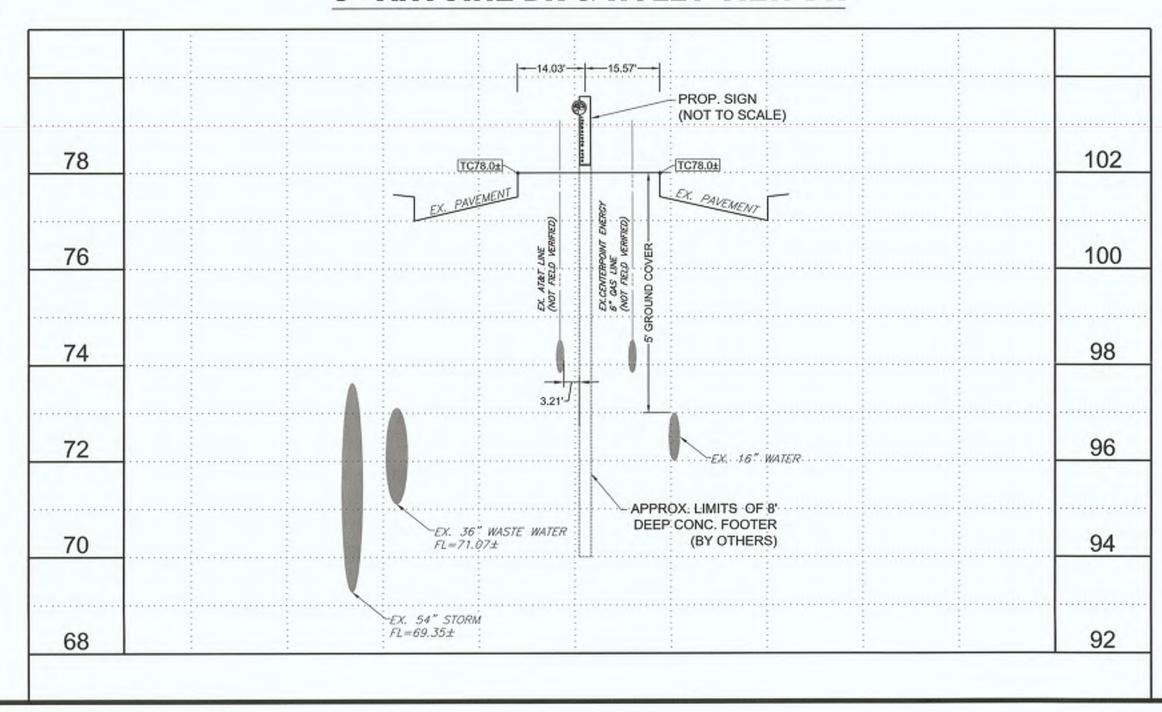


FLOODPLAIN NOTE:
THIS SUBJECT TRACT LIES WITHIN UNSHADED ZONE "X". AREAS
DETERMINED TO BE OUTSIDE THE 500-YR FLOODPLAIN (0.2%
ANNUAL CHANCE) AS DELINEATED ON THE FLOOD INSURANCE
RATE MAP FOR HARRIS COUNTY, TEXAS AND INCORPORATED
AREAS, MAP NO. 48201C0655 M, REVISED JUNE 9,2014.

F31170752

CONTRACTOR TO FIELD VERIFY EXISTING UTILITIES BASE ON AS-BUILT DRAWINGS AND GIMS.

5 - ANTOINE DR & HOLLY VIEW DR



CENTERPOINT ENERGY
TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVIDE, CALL CENTERPOINT ENERGY AT 7:5-207-222

NOTICE:
For your safety, you are required by Yexos Law to call 811 at least 48 hours before you dig so that underground lines can be marked. This Verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date: 8 / 3 / 17

Verification of Private Utility Lines

Date: 8 / 3 / 17

Verification to CNLY. (This Signature widths soft you have shown CNP Nazaral Gas lines correctly - not to be used for conflict welfication (NS excite lines are not shown). (Suprature Videl for the norths.)

Control Point Energy/LINESHORD Excitod Facilities Verification CNLY. (This Signature Videl for six morths.)

AT&TEXAS/SWBT UTILITY LINES SHOWN Approved for ATAT Transit/Wiff Londerground condult facilities only.

DESCRIPTION

DATE

Ward, Getz & Associates, LLP
TX FIRM No. F-9756
2500 Tanglewilde, Ste 120
Houston, Texas 77063
Voice: 713.789.1900
Contact:

7/24/17

NEAR NORTHWEST MANAGEMENT DISTRICT VERTICAL DISTRICT MARKERS PHASE II

MARKER 5

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DRAWING SCALE:

PLAN: 1"=20"

PROFILE: HORIZ: 1"=20' VERT: 1"=2'

SHEET NO. 16 OF 16

TORM WATER QUALITY