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- ~~L1.0 LANDSCAPE PLAN~~
- ~~L2.0 LANDSCAPE NOTES AND DETAILS~~
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- ~~L3.0 LANDSCAPE ELEVATIONS~~
- ~~L4.0 LANDSCAPE ELEVATIONS~~

912 I-30 FRONTAGE ROAD  
ROCKWALL COUNTY  
ROCKWALL, TEXAS 75087  
ZONING: C  
COMMERCIAL

## DEVELOPER:

TEXAS ROADHOUSE  
CONTACT: DUANE BANET  
TEXAS ROADHOUSE HOLDINGS, LLC  
6040 DUTCHMANS LANE, SUITE 400  
LOUISVILLE, KENTUCKY 40205  
EMAIL: DUANE.BANET@TEXASROADHOUSE.COM

## ENGINEER:

**GreenbergFarrow**

CONTACT: JEFF RATH, P.E.  
21 S. EVERGREEN AVENUE, SUITE 200  
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TEL: (224) 310-5064  
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**DISCLAIMER**  
TO THE BEST OF OUR KNOWLEDGE, GREENBERGFARROW, HEREBY STATES THAT THIS PLAN IS AS-BUILT. THIS INFORMATION PROVIDED IS BASED ON SURVEYING THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

## CONTACTS:

### PLANNING:

CITY OF ROCKWALL  
ENGINEERING DEPARTMENT  
385 S. GOLAD STREET  
ROCKWALL, TX 75087  
CONTACT: AMY WILLIAMS,  
ASSISTANT CITY ENGINEER  
TEL: (972) 771-7746

### ELECTRIC:

TXU ENERGY  
CONSTRUCTION AND BUILDER SERVICES  
TEL: (800) 711-9112  
CONSTRUCTIONSERVICES@TXU.COM

### SAN. & STORM:

CITY OF ROCKWALL  
ENGINEERING DEPARTMENT  
385 S. GOLAD STREET  
ROCKWALL, TX 75087  
CONTACT: AMY WILLIAMS,  
ASSISTANT CITY ENGINEER  
TEL: (972) 771-7746

### GAS:

ATMOS ENERGY  
TEL: (877) 460-7067

### FIRE:

ROCKWALL FIRE DEPARTMENT  
385 S. GOLAD STREET  
ROCKWALL, TX 75087  
CONTACT: KEVIN CLARK,  
FIRE MARSHAL  
TEL: (972) 771-7770

## SURVEYOR:

SPOONER & ASSOCIATES  
CONTACT: ERIC SPOONER  
309 BYERS STREET, #100  
EULESS, TX 76039  
TEL: (817) 685-8448  
PROJECT NO. 16-156

## GEOTECHNICAL ENGINEER:

TERRACON CONSULTANTS, INC.  
CONTACT: GREGORY S. FAGAN, P.E.  
8901 CARPENTER FREEWAY, SUITE 100  
DALLAS, TEXAS 75247  
TEL: (214) 630-1010  
PROJECT NO. 94165431



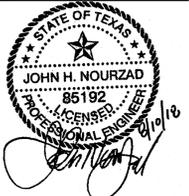
JOB NO. 20151291.0

DATE: 8-7-2018



**ISSUE/REVISION RECORD**

DATE	DESCRIPTION
12/19/16	SITE PLAN
01/23/17	SITE PLAN
01/27/17	SITE PLAN SUBMITTAL
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05/01/17	SITE PLAN SUBMITTAL
05/19/17	ENGINEERING REVIEW
06/27/17	PERMIT SET
07/19/17	PERMIT/BID SET
07/20/17	ENGINEERING REVIEW
08/04/17	ENGINEERING REVISIONS
10/11/17	STORMWATER REVISIONS
11/07/17	STORMWATER REVISIONS
11/20/17	CONSTRUCTION SET
12/13/17	GRADING REVISIONS
01/05/18	OWNER REVISIONS
08/07/18	AS-BUILT



**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH  
**QUALITY CONTROL**  
LARRY DIEHL  
**DRAWN BY**  
MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

**ROCKWALL TEXAS**  
**912 I-30 FRONTAGE ROAD**



**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**DEMOLITION PLAN**

**SHEET NUMBER**  
**C2.0**

**DEMOLITION PLAN LEGEND:**

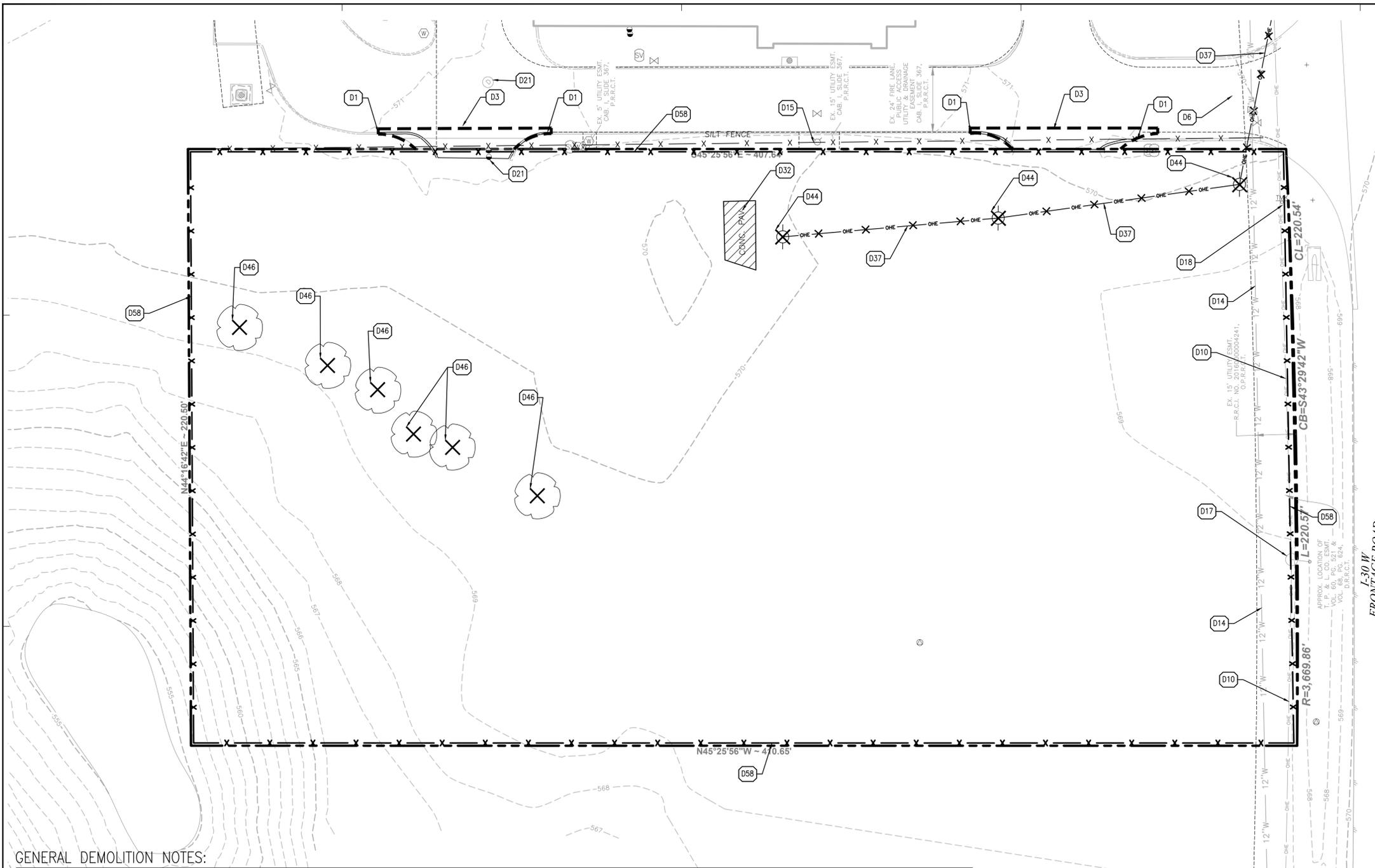
- PROPERTY LINE
  - - - PROPOSED SAW CUT LINE
  - ✕ OHE ✕ EXISTING ELECTRIC LINE TO BE REMOVED
  - x - x - PROPOSED CONSTRUCTION FENCE
  - ✕ EXISTING TREE TO BE REMOVED
- NOTE: SEE SHEET C1.0 FOR EXISTING LEGEND

**DEMOLITION HATCH LEGEND:**

- [Hatched Box] EXISTING ASPHALT PAVEMENT TO BE REMOVED
- [Hatched Box] EXISTING CONCRETE PAVEMENT TO BE REMOVED

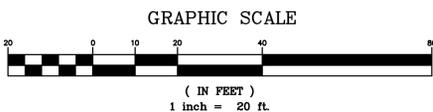
**DEMOLITION KEY NOTES:**

- D1 SAW CUT EXISTING CONCRETE CURB
- D3 SAW CUT EXISTING CONCRETE PAVEMENT
- D6 EXISTING CONCRETE PAVEMENT TO REMAIN
- D10 APPROXIMATE LOCATION OF EXISTING OVERHEAD ELECTRICAL LINE TO REMAIN
- D15 EXISTING FIRE HYDRANT TO REMAIN
- D14 APPROXIMATE LOCATION OF EXISTING WATER LINE TO REMAIN
- D17 EXISTING POWER POLE TO REMAIN
- D18 EXISTING SIGN TO REMAIN
- D21 EXISTING SANITARY STRUCTURE TO REMAIN
- D32 EXISTING CONCRETE PAVEMENT TO BE REMOVED
- D37 APPROXIMATE LOCATION OF EXISTING OVERHEAD ELECTRICAL LINE TO BE REMOVED
- D44 EXISTING POWER POLE TO BE REMOVED
- D46 EXISTING TREE TO BE REMOVED
- D58 PROPOSED CONSTRUCTION FENCE



**GENERAL DEMOLITION NOTES:**

- CONTRACTOR SHALL CONTACT STATE ONE CALL SYSTEM (811) AND/OR PRIVATE LOCATING SERVICE TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO STARTING ANY DEMOLITION AND/OR EXCAVATION. EXACT LOCATIONS OF ANY EXISTING ELECTRIC, GAS, TELEPHONE, ETC. LINES ARE UNKNOWN.
- CONTRACTOR SHALL PERFORM ALL DEMOLITION WORK IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY DEMOLITION PERMITS AND COORDINATE ALL DEMOLITION WORK WITH THE MUNICIPALITY AND OWNERS REPRESENTATIVE TO ENSURE PROTECTION AND MAINTENANCE OF EXISTING SITE FEATURES NOT NOTED FOR REMOVAL.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND DEVICES SHALL BE INSTALLED AND FUNCTIONAL BEFORE THE SITE IS OTHERWISE DISTURBED. THEY SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SITE STABILIZATION HAS BEEN ACHIEVED (SEE STORMWATER POLLUTION PREVENTION PLAN FOR ADDITIONAL INFORMATION AND DETAILS).
- THE PURPOSE OF THIS DRAWING IS TO CONVEY THE OVERALL SCOPE OF DEMOLITION WORK AND IT IS NOT INTENDED TO COVER ALL DETAILS OR SPECIFICATIONS REQUIRED TO COMPLY WITH GENERALLY ACCEPTED DEMOLITION PRACTICES. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE, SCOPE OF WORK, AND ALL EXISTING CONDITIONS AT THE JOB SITE PRIOR TO BIDDING AND COMMENCING THE WORK. THE DEMOLITION CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, OR PROCEDURES USED TO COMPLETE THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND IS LIABLE FOR THE SAFETY OF THE PUBLIC AND CONTRACTOR'S EMPLOYEES DURING THE COURSE OF THE PROJECT.
- THE DEMOLITION PLAN IS INTENDED TO SHOW REMOVAL OF KNOWN SITE FEATURES AND UTILITIES AS SHOWN ON THE SURVEY PROVIDED TO THE ENGINEER FOR DESIGN. THERE MAY BE OTHER SITE FEATURES, UTILITIES, STRUCTURES, AND MISCELLANEOUS ITEMS BOTH BURIED AND ABOVE GROUND THAT ARE WITHIN THE LIMITS OF WORK THAT MAY REQUIRE REMOVAL FOR THE PROPOSED SITE IMPROVEMENTS BUT THAT ARE NOT SHOWN HEREON. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF SUCH ITEMS AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES PRIOR TO COMMENCING ANY SITE DEMOLITION OPERATIONS TO COORDINATE DISCONNECTION AND REMOVAL OF EXISTING UTILITIES WITHIN THE PROPOSED AREA OF WORK. CONTRACTOR SHALL ALSO CONTACT CATLIN DAWSON WITH TEXAS ROADHOUSE (502-855-5556 OR CATLIN.DAWSON@TEXASROADHOUSE.COM) TO COORDINATE DISCONNECTION OF THE EXISTING BUILDING TELEPHONE SERVICE.
- CONTRACTOR SHALL COORDINATE ANY SHUT DOWNS OF EXISTING ROADWAYS AND UTILITIES WITH THE NECESSARY GOVERNING AUTHORITIES.
- ALL EXISTING BUILDINGS, FOUNDATIONS, CONCRETE OR ASPHALT PAVEMENT OR WALKS, CURB AND GUTTER AND MISCELLANEOUS STRUCTURES (INCLUDING, BUT NOT LIMITED TO FENCES, POLES, YARD LIGHTS, ELECTRICAL PANELS, WHEEL STOPS AND MISCELLANEOUS DEBRIS) NOTED TO BE REMOVED SHALL BE DEMOLISHED, REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR.
- VOIDS LEFT BY ANY ITEM REMOVED UNDER ANY PROPOSED BUILDINGS, PAVEMENTS, OR WALKS OR WITHIN 24" THEREOF SHALL BE BACKFILLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT.
- AS SOON AS DEMOLITION WORK HAS BEEN COMPLETED, FINAL GRADE OF BACKFILL IN DEMOLITION AREAS SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT TO PRESENT A NEAT, WELL DRAINED APPEARANCE, AND TO PREVENT WATER FROM DRAINING UNNECESSARILY ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL PROVIDE TEMPORARY DIVERSION SWALES OR OTHER MEANS OF MAINTAINING ADEQUATE SITE DRAINAGE.
- ALL EXISTING TREES SHOWN ARE TO REMAIN UNLESS OTHERWISE NOTED (REFER TO LANDSCAPE PLANS FOR ALL LANDSCAPING REMOVAL REQUIREMENTS).
- ALL EXISTING TREES, BRUSH AND MISCELLANEOUS VEGETATION NOTED TO BE REMOVED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR (REFER TO LANDSCAPE PLANS FOR ALL LANDSCAPING REMOVAL REQUIREMENTS).
- CONTRACTOR SHALL UTILIZE CARE WHEN WORKING NEAR EXISTING UTILITIES TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES NOT NOTED TO BE REMOVED SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
- CONTRACTOR SHALL REPAIR AT HIS EXPENSE ANY DAMAGE TO EXISTING ASPHALT, CONCRETE, CURBS, SIDEWALKS, ETC. RESULTING FROM CONSTRUCTION TRAFFIC AND/OR OPERATIONS. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
- ALL FIRE ACCESS LANES WITHIN THE PROJECT AREA SHALL REMAIN IN SERVICE, CLEAN OF DEBRIS, AND ACCESSIBLE FOR USE BY EMERGENCY VEHICLES.
- ALL EXISTING SANITARY SEWERS, STORM SEWERS, WATER MAINS OR IRRIGATION LINES AND APPURTENANCES NOTED FOR REMOVAL WITHIN THE AREA OF THE PROPOSED CONSTRUCTION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. ALL ABANDONED SEWER LINES SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FEET LONG NON-SHRINK CONCRETE MORTAR PLUGS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS TO HAVE RECYCLABLE MATERIALS REMOVED FROM THE SITE AND RECYCLED.
- SEE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION AND REQUIREMENTS.





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**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH  
**QUALITY CONTROL**  
LARRY DIEHL  
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**PROJECT NAME**  
**TEXAS ROADHOUSE**

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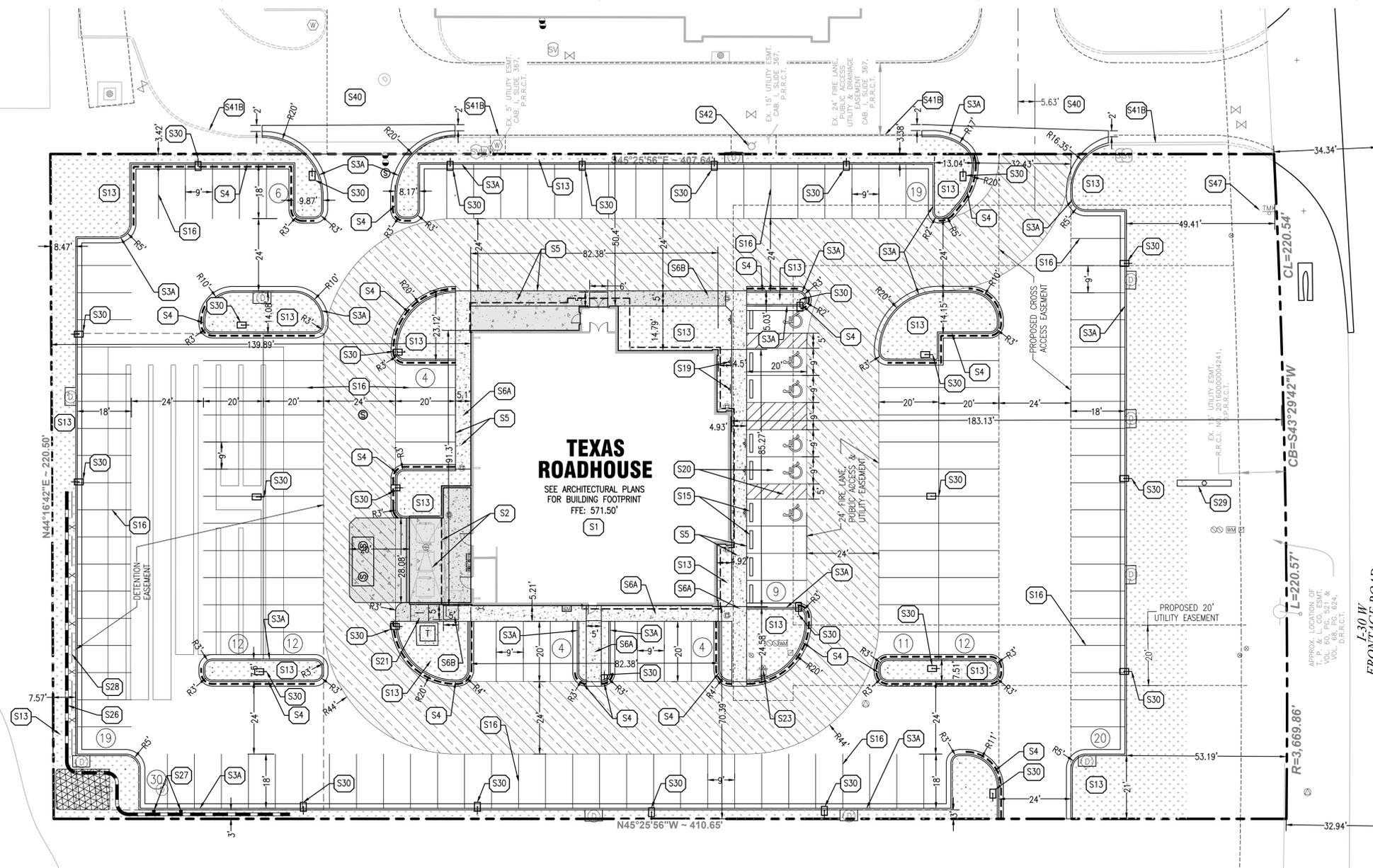


**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**SITE AND DIMENSIONAL PLAN**

**SHEET NUMBER**

**C3.0**



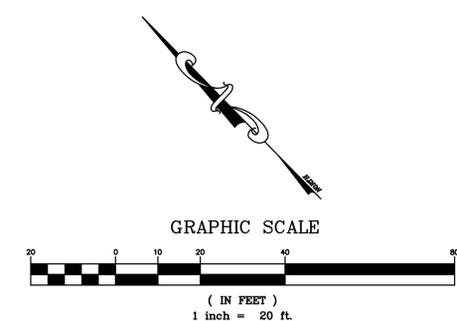
**PROPOSED LEGEND:**

- PROPERTY LINE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED REVERSE PITCH CURB AND GUTTER
- PROPOSED PARKING STALL COUNT
- PROPOSED CONCRETE WHEEL STOP
- PROPOSED SIGN
- PROPOSED POLE SIGN
- PROPOSED LIGHT POLE
- PROPOSED STORM SEWER STRUCTURES
- PROPOSED SANITARY SEWER STRUCTURES
- PROPOSED SANITARY SEWER GREASE INTERCEPTOR
- PROPOSED FIRE HYDRANT
- PROPOSED FIRE DEPARTMENT CONNECTION (FDC)
- PROPOSED WATER METER AND VAULT
- PROPOSED GATE VALVE AND VALVE BOX
- PROPOSED WATER SERVICE TAP
- PROPOSED BACK FLOW PREVENTOR
- PROPOSED TRANSFORMER PAD AND STEEL BOLLARDS
- PROPOSED GAS METER
- PROPOSED ELECTRIC METER, CT CABINET AND DISCONNECT

NOTE: SEE SHEET C1.0 FOR EXISTING LEGEND

**PAVEMENT HATCH LEGEND:**

- PROPOSED CONCRETE SIDEWALK  
3,000 PSI, MIN 5.5 SACK MIN  
5" PORTLAND CEMENT CONCRETE  
6" MOISTURE CONDITIONED SUBGRADE
- PROPOSED INTEGRAL BLACK CONCRETE SIDEWALK  
3,000 PSI, MIN 5.5 SACK MIN  
5" PORTLAND CEMENT CONCRETE  
6" MOISTURE CONDITIONED SUBGRADE



CASE NO. SP2017-012

**SITE KEY NOTES:**

- S1 PROPOSED TEXAS ROADHOUSE BUILDING (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S2 PROPOSED TRASH ENCLOSURE WITH SELF-LATCHING MECHANISM (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S3A PROPOSED CONCRETE CURB AND GUTTER
- S4 PROPOSED REVERSE PITCH CONCRETE CURB AND GUTTER
- S5 PROPOSED MONOLITHIC CONCRETE CURB AND SIDEWALK
- S6A PROPOSED 5" CONCRETE SIDEWALK
- S6B PROPOSED INTEGRAL BLACK CONCRETE SIDEWALK
- S13 PROPOSED LANDSCAPE AREA (SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S15 PROPOSED PRECAST CONCRETE WHEEL STOP (TYP. OF 8)
- S16 PROPOSED 4" PAVEMENT STRIPING PER LOCAL CODE
- S19 PROPOSED HANDICAP ACCESSIBLE PARKING SIGN PER LOCAL CODE (TYP. OF 6)
- S20 PROPOSED HANDICAP ACCESSIBLE PARKING STALL STRIPING AND SYMBOL PER LOCAL CODE (TYP.)
- S21 PROPOSED HANDICAP ACCESSIBLE CURB RAMP AT 12:1 MAXIMUM SLOPE PER LOCAL CODES
- S22 PROPOSED CONCRETE TRANSFORMER PAD WITH STEEL BOLLARD PROTECTION (CONTRACTOR SHALL COORDINATE CONCRETE TRANSFORMER PAD LOCATION, SIZE AND THICKNESS WITH ELECTRIC COMPANY PRIOR TO INSTALLATION)
- S23 PROPOSED FIRE HYDRANT
- S26 PROPOSED BLOCK RETAINING WALL
- S27 PROPOSED BOLLARD
- S28 PROPOSED TXDOT GUARD RAIL
- S29 PROPOSED POLE SIGN
- S30 PROPOSED LIGHT POLE, MUST BE 2' BEHIND CURB.
- S40 EXISTING CONCRETE PAVEMENT TO REMAIN
- S41B EXISTING CONCRETE CURB TO REMAIN
- S42 EXISTING FIRE HYDRANT TO REMAIN
- S47 EXISTING SIGN TO REMAIN

**GENERAL SITE NOTES:**

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE WORKING CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SITE SETBACKS, EASEMENTS AND DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST STATE AND LOCAL GOVERNMENT CONSTRUCTION STANDARDS AND SPECIFICATIONS.
5. ALL HANDICAP ACCESSIBLE SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND REQUIREMENTS.
6. IF DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR FINDS ANY DISCREPANCIES OR CONFLICTS BETWEEN THE PROPOSED SITE IMPROVEMENTS INDICATED ON THE PLANS AND THE PHYSICAL CONDITIONS OF THE SITE, OR ANY ERRORS OR OMISSIONS WITHIN THE PLANS OR IN THE SITE LAYOUT AS PROVIDED BY THE ENGINEER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMMEDIATELY NOTIFY THE ENGINEER, UNTIL AUTHORIZED TO PROCEED, ANY WORK PERFORMED BY THE CONTRACTOR AFTER SUCH A DISCOVERY WILL BE AT THE CONTRACTOR'S SOLE RISK AND EXPENSE.
7. CONTRACTOR SHALL COORDINATE ALL SITE IMPROVEMENTS WITH ARCHITECTURAL PLANS. ARCHITECTURAL PLANS SHALL BE USED FOR BUILDING STAKEOUT.
8. CONTRACTOR SHALL COORDINATE ALL LANDSCAPE IMPROVEMENTS, INCLUDING NEW PLANTINGS AND TURF AREA RESTORATION REQUIREMENTS, WITH LANDSCAPE PLANS.
9. CONSTRUCTION SURVEY AND STAKEOUT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
10. ALL DIMENSIONS SHOWN ARE MEASURED FROM FACE OF CURB TO FACE OF CURB OR EDGE OF PAVEMENT TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
11. ALL CURB RADII ARE MEASURED AT THE FACE OF CURB UNLESS OTHERWISE NOTED.
12. ALL NEW ASPHALT AND/OR CONCRETE PAVING SHALL MATCH EXISTING PAVEMENTS FLUSH.
13. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OUTSIDE OF CONSTRUCTION LIMITS TO ORIGINAL CONDITION OR BETTER.
14. CONTRACTOR SHALL REPAIR AT HIS EXPENSE ANY DAMAGE TO EXISTING ASPHALT, CONCRETE, CURBS, SIDEWALKS, ETC., RESULTING FROM CONSTRUCTION TRAFFIC AND/OR OPERATIONS. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
15. ALL FIRE ACCESS LANES WITHIN THE PROJECT AREA SHALL REMAIN IN SERVICE, CLEAN OF DEBRIS, AND ACCESSIBLE FOR USE BY EMERGENCY VEHICLES.
16. SEE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

**PROJECT INFORMATION:**

SITE AREA: ±2.075 ACRES  
ZONED: COMMERCIAL  
PROPOSED BUILDING AREA: 7,420 SQ. FT.

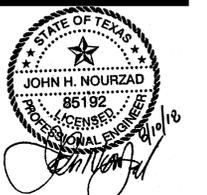
PROPOSED USE: RESTAURANT  
BUILDING HEIGHT: 28'-10"  
PARKING REQUIRED: 75 STALLS  
(1 STALL PER 4 SEATS AND 281 SEATS TOTAL OR 1 STALL PER 100 SF FLOOR AREA, WHICHEVER IS GREAT)

PARKING PROVIDED: 182 STALLS  
(INCLUDING 6 ADA STALLS)

**SITE PLAN NOTES:**

1. REFER TO THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON CONSULTANTS, INC. AND DATED OCTOBER 18TH, 2016 FOR ADDITIONAL INFORMATION REGARDING THE EXISTING SOIL CONDITIONS AND SUBGRADE PREPARATION REQUIREMENTS AND PROPOSED PAVEMENT RECOMMENDATIONS (TERRACON PROJECT NO. 94165431).

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**TEXAS ROADHOUSE**

**ROCKWALL TEXAS**  
912 I-30 FRONTAGE ROAD



**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**PAVING PLAN**

**SHEET NUMBER**  
**C3.1**

**PROPOSED LEGEND:**

- PROPERTY LINE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED REVERSE PITCH CURB AND GUTTER
- PROPOSED PARKING STALL COUNT
- PROPOSED CONCRETE WHEEL STOP
- PROPOSED SIGN
- PROPOSED LIGHT POLE
- PROPOSED STORM SEWER STRUCTURES
- PROPOSED SANITARY SEWER STRUCTURES
- PROPOSED SANITARY SEWER GREASE INTERCEPTOR
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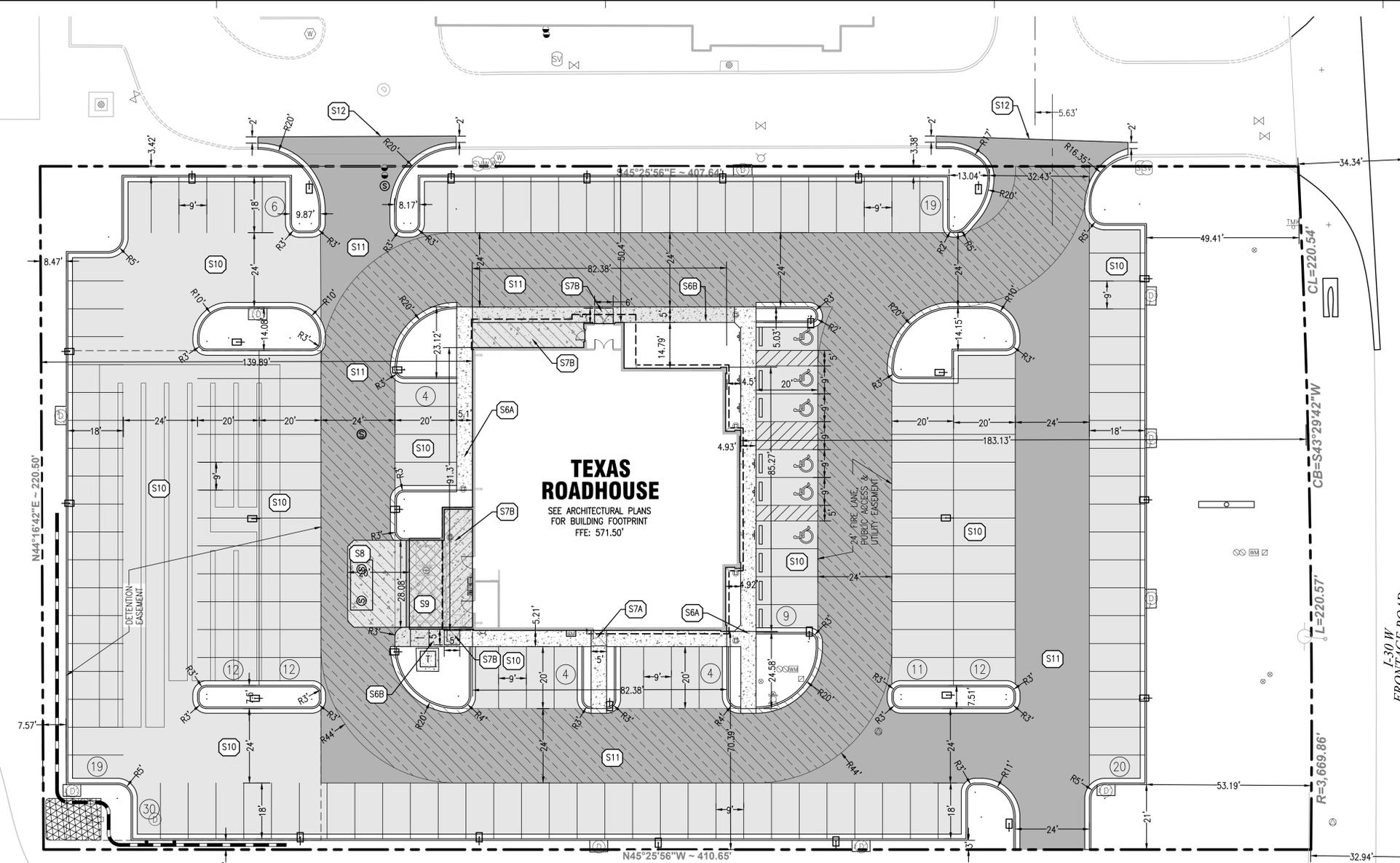
NOTE: SEE SHEET C1.0 FOR EXISTING LEGEND

**SITE KEY NOTES:**

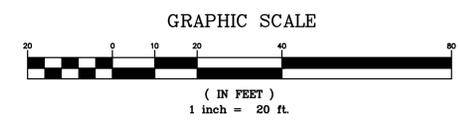
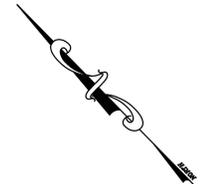
- S6A PROPOSED 5" CONCRETE SIDEWALK
- S6B PROPOSED INTEGRAL BLACK CONCRETE SIDEWALK
- S7A PROPOSED CONCRETE LANDING (SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S7B PROPOSED INTEGRAL BLACK COLORED CONCRETE LANDING (SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S8 PROPOSED HEAVY DUTY INTEGRAL BLACK COLORED CONCRETE
- S9 PROPOSED HEAVY DUTY INTEGRAL BLACK COLORED CONCRETE SLAB
- S10 PROPOSED CONCRETE PAVEMENT
- S11 PROPOSED HEAVY DUTY CONCRETE PAVEMENT
- S12 PROPOSED LONGITUDINAL BUTT JOINT

**PAVEMENT HATCH LEGEND:**

- PROPOSED CONCRETE SIDEWALK  
3,000 PSI, MIN 5.5 SACK MIN  
5" PORTLAND CEMENT CONCRETE  
6" MOISTURE CONDITIONED SUBGRADE
- PROPOSED INTEGRAL BLACK CONCRETE SIDEWALK  
3,000 PSI, MIN 5.5 SACK MIN  
5" PORTLAND CEMENT CONCRETE  
6" MOISTURE CONDITIONED SUBGRADE
- PROPOSED CONCRETE  
3,000 PSI, MIN 5.5 SACK MIN  
6" PORTLAND CEMENT CONCRETE  
WITH NO. 4 BARS AT 12" O.C. EACH WAY  
6" MOISTURE CONDITIONED SUBGRADE
- PROPOSED INTEGRAL BLACK COLORED CONCRETE  
3,000 PSI, MIN 5.5 SACK MIN  
6" PORTLAND CEMENT CONCRETE  
WITH NO. 4 BARS AT 12" O.C. EACH WAY  
6" MOISTURE CONDITIONED SUBGRADE
- PROPOSED HEAVY DUTY INTEGRAL BLACK COLORED CONCRETE  
3,600 PSI, MIN 6.5 SACK MIN  
7" PORTLAND CEMENT CONCRETE  
WITH NO. 3 BARS AT 18" O.C. EACH WAY  
6" MOISTURE CONDITIONED SUBGRADE
- PROPOSED HEAVY DUTY INTEGRAL BLACK COLORED CONCRETE SLAB  
3,600 PSI, MIN 6.5 SACK MIN  
7" PORTLAND CEMENT CONCRETE  
WITH NO. 3 BARS AT 12" O.C. EACH WAY  
6" MOISTURE CONDITIONED SUBGRADE
- PROPOSED CONCRETE PAVEMENT  
3,000 PSI, MIN 5.5 SACK MIN  
5" REINFORCED CONCRETE  
WITH NO. 3 BARS AT 18" O.C. EACH WAY  
6" MOISTURE CONDITIONED SUBGRADE
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT  
3,600 PSI, MIN 6.5 SACK MIN  
6" REINFORCED CONCRETE  
WITH NO. 3 BARS AT 18" O.C. EACH WAY  
6" MOISTURE CONDITIONED SUBGRADE

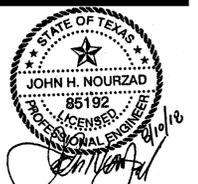


I-30 W FRONTAGE ROAD



CASE NO. SP2017-012

DATE	DESCRIPTION
12/19/16	SITE PLAN
01/23/17	SITE PLAN
01/27/17	SITE PLAN SUBMITTAL
04/07/17	SITE PLAN SUBMITTAL
04/27/17	COORDINATION SET
05/01/17	SITE PLAN SUBMITTAL
05/19/17	ENGINEERING REVIEW
06/27/17	PERMIT SET
07/19/17	PERMIT/BD SET
07/20/17	ENGINEERING REVIEW
08/04/17	ENGINEERING REVIEW
10/11/17	STORMWATER REVISIONS
11/07/17	STORMWATER REVISIONS
11/29/17	CONSTRUCTION SET
12/15/17	GRADING REVISIONS
01/05/18	OWNER REVISIONS
08/07/18	AS-BUILT



**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH  
**QUALITY CONTROL**  
LARRY DIEHL  
**DRAWN BY**  
MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

**ROCKWALL TEXAS**

**912-30 FRONTAGE ROAD**



**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**GRADING AND DRAINAGE PLAN**

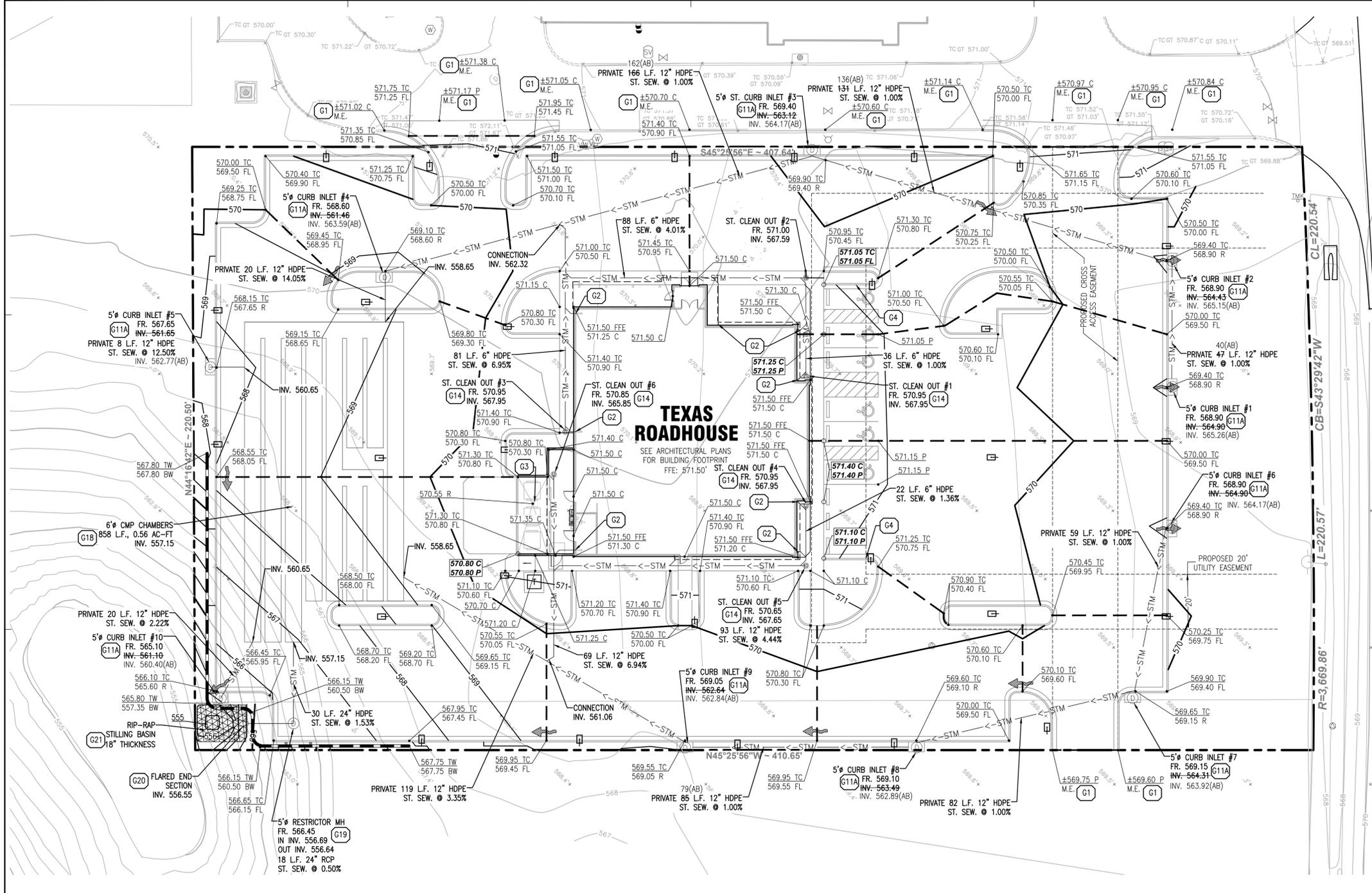
**SHEET NUMBER**  
**C4.0**

**PROPOSED LEGEND:**

- PROPERTY LINE
- ===== PROPOSED CONCRETE CURB AND GUTTER
- ===== PROPOSED REVERSE PITCH CONCRETE CURB AND GUTTER
- 570 --- PROPOSED CONTOUR
- 570.85 TC  
570.35 FL PROPOSED SPOT ELEVATION
- FFE: FINISHED FLOOR ELEVATION  
TC: TOP OF CURB ELEVATION  
FL: CURB FLOWLINE ELEVATION  
C: TOP OF CONCRETE ELEVATION  
P: TOP OF PAVEMENT ELEVATION  
FG: FINISHED GRADE ELEVATION  
ME: MATCH EXISTING ELEVATION  
R: RIM ELEVATION
- 571.80 C  
571.80 P PROPOSED SPOT ELEVATION  
EXPOSED CURB FACE VARIES
- PROPOSED GRADING RIDGE LINE
- PROPOSED DRAINAGE FLOW DIRECTION
- PROPOSED OVERLAND FLOOD ROUTE
- PROPOSED STORM SEWER STRUCTURE
- PROPOSED STORM SEWER STRUCTURE WITH CLOSED LID
- PROPOSED STORM SEWER CLEAN OUT
- PROPOSED HEAVY DUTY AREA DRAIN
- STM --- PROPOSED STORM SEWER

**GRADING & DRAINAGE KEY NOTES:**

- G1 FIELD VERIFY AND MATCH EXISTING ELEVATION AT PROJECT SCOPE OF WORK LIMITS (TYP.)
- G2 PROPOSED ROOF DRAIN LOCATION (SEE UTILITY PLAN FOR MORE INFORMATION)
- G3 PROPOSED ZURN Z505 AREA DRAIN (SEE UTILITY AND PLUMBING PLANS)
- G4 CURB TRANSITION FOR 0" TO 6" IN HEIGHT
- G11A PROPOSED 5" PRECAST CONCRETE CURB INLET WITH NEEHAH R-3065-A CURB BOX PER NCTCOG 4TH EDITION STANDARD AND CITY OF ROCKWALL STANDARDS
- G12 PROPOSED 4" PRECAST CONCRETE MANHOLE WITH NEEHAH R-1772 FRAME AND LID PER NCTCOG 4TH EDITION STANDARD AND CITY OF ROCKWALL STANDARDS
- G14 PROPOSED STORM SEWER CLEAN OUT
- G18 PROPOSED UNDERGROUND DETENTION SYSTEM
- G19 PROPOSED 5" RESTRICTOR MANHOLE STRUCTURE (SEE C7.1 FOR DETAIL)
- G20 PROPOSED PRE-CAST CONCRETE FLARED END SECTION
- G21 PROPOSED GROUTED RIP-RAP STILLING BASIN (SEE C7.2 FOR DETAILS AND CALCULATIONS)



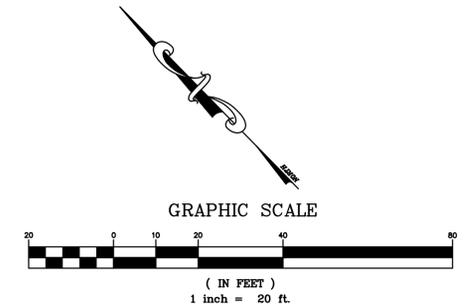
**GENERAL GRADING NOTES:**

- ALL GRADING AND SITE PREPARATION WORK SHALL CONFORM WITH THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
- CONTRACTOR SHALL CAREFULLY PRESERVE ALL SITE BENCHMARKS AND REFERENCE POINTS DURING CONSTRUCTION OPERATIONS.
- CONTRACTOR SHALL PROVIDE A MINIMUM OF 95% STANDARD DENSITY COMPACTION USING A SHEEP'S FOOT ROLLER.
- CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST FORTY-EIGHT (48) HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED SITE IMPROVEMENTS SHOWN ON THE PLANS.
- CONTRACTOR SHALL INSTALL APPROPRIATE TREE PROTECTION MEASURES PRIOR TO COMMENCEMENT OF SITE GRADING OPERATIONS.
- ALL PROPOSED GRADING, PAVEMENT, APRONS, CURBS, WALKS, ETC. SHALL MATCH EXISTING GRADES FLUSH.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TO ALL STORM DRAINAGE STRUCTURES. AREAS OF SURFACE PONDING SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- ALL EXISTING AND PROPOSED TOP OF FRAME ELEVATIONS FOR STORM, SANITARY, WATER AND OTHER UTILITY STRUCTURES SHALL BE ADJUSTED TO MEET FINISHED GRADE WITHIN THE PROJECT LIMITS.
- CONTRACTOR SHALL UTILIZE CARE WHEN WORKING NEAR EXISTING UTILITIES TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES NOT NOTED TO BE REMOVED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
- CONTRACTOR SHALL REPAIR AT HIS EXPENSE ANY DAMAGE TO EXISTING ASPHALT, CONCRETE, CURBS, SIDEWALKS, ETC. RESULTING FROM CONSTRUCTION TRAFFIC AND/OR OPERATIONS. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.

**FLOOD NOTE:**

PROJECT SITE DOES NOT LIE WITHIN A 100 YEAR FLOOD HAZARD AREA AND IS LOCATED IN ZONE "X" AS SHOWN ON THE ABOVE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 48397C0040L WITH AN EFFECTIVE DATE OF SEPTEMBER 26, 2008.

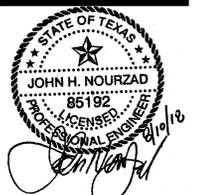
- CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OUTSIDE OF CONSTRUCTION LIMITS TO ORIGINAL CONDITION OR BETTER.
- MAXIMUM CROSS SLOPES AND LONGITUDINAL SLOPES FOR ALL CONCRETE SIDEWALKS AND HANDICAP ACCESSIBLE ROUTES SHALL NOT EXCEED 2% AND 5%, RESPECTIVELY.
- MAXIMUM SLOPES WITHIN THE HANDICAP ACCESSIBLE PARKING AREAS SHALL NOT EXCEED 2% IN ANY DIRECTION.
- MAXIMUM GRADE DIFFERENCE BETWEEN PAVEMENT SURFACES AND ADJACENT CONCRETE SIDEWALKS FOR THE ACCESSIBLE ROUTE TO THE BUILDING SHALL NOT EXCEED 1/4" VERTICAL OR 1/2" WHEN BEVELED.
- ALL HANDICAP ACCESSIBLE EXTERIOR DOORWAY LOCATIONS REQUIRE AN EXTERIOR LANDING THAT IS A MINIMUM OF FIVE (5) FEET IN LENGTH WITH A SLOPE NOT EXCEEDING 2% IN ANY DIRECTION.
- EXCAVATION SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. SHORING SHALL BE IN ACCORDANCE WITH ALL O.S.H.A AND LOCAL REGULATIONS.
- ALL STRUCTURE BENCH WALLS SHALL BE SHAPED AND FORMED FOR A CLEAN TRANSITION WITH PROPER HYDRAULICS TO ALLOW THE SMOOTH CONVEYANCE OF FLOWS THROUGH THE MANHOLE OR BOX INLET. THE BENCH WALL SHALL FORM A DEFINED CHANNEL, TO A MINIMUM HEIGHT OF 80-PERCENT OF THE INSIDE DIAMETER OF THE INLET AND OUTLET PIPES TO FORM A 'U' SHAPED CHANNEL, CONSTRUCTED AT A MINIMUM 1/8-INCH PER FOOT SLOPE TO THE MANHOLE WALL.
- ALL STORM WATER INLETS AND CATCH BASIN CASTINGS SHALL HAVE THE WORDS "NO DUMPING, DRAINS TO STREAM", OR SIMILARLY APPROVED MESSAGE, CAST IN RAISED OR RECESSED LETTERS AT A MINIMUM OF 1" IN HEIGHT. IN ADDITION, A SYMBOL OF A FISH SHALL ALSO BE CAST WITH THE LETTERS.
- SEE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- REFER TO SHEET C4.7 - INITIAL GRADING PLAN. WORK SHOWN ON SHEET C4.7 SHALL BE CONDUCTED BEFORE WORK SHOWN ON THIS SHEET. "PROPOSED" CONTOURS SHOWN ON SHEET C4.7 ARE "EXISTING" CONTOURS SHOWN ON THIS SHEET.



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**ISSUE/REVISION RECORD**

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12/19/16	SITE PLAN
01/23/17	SITE PLAN
01/27/17	SITE PLAN SUBMITTAL
04/07/17	SITE PLAN SUBMITTAL
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**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH

**QUALITY CONTROL**  
LARRY DIEHL

**DRAWN BY**  
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**PROJECT NAME**  
**TEXAS ROADHOUSE**

**ROCKWALL TEXAS**

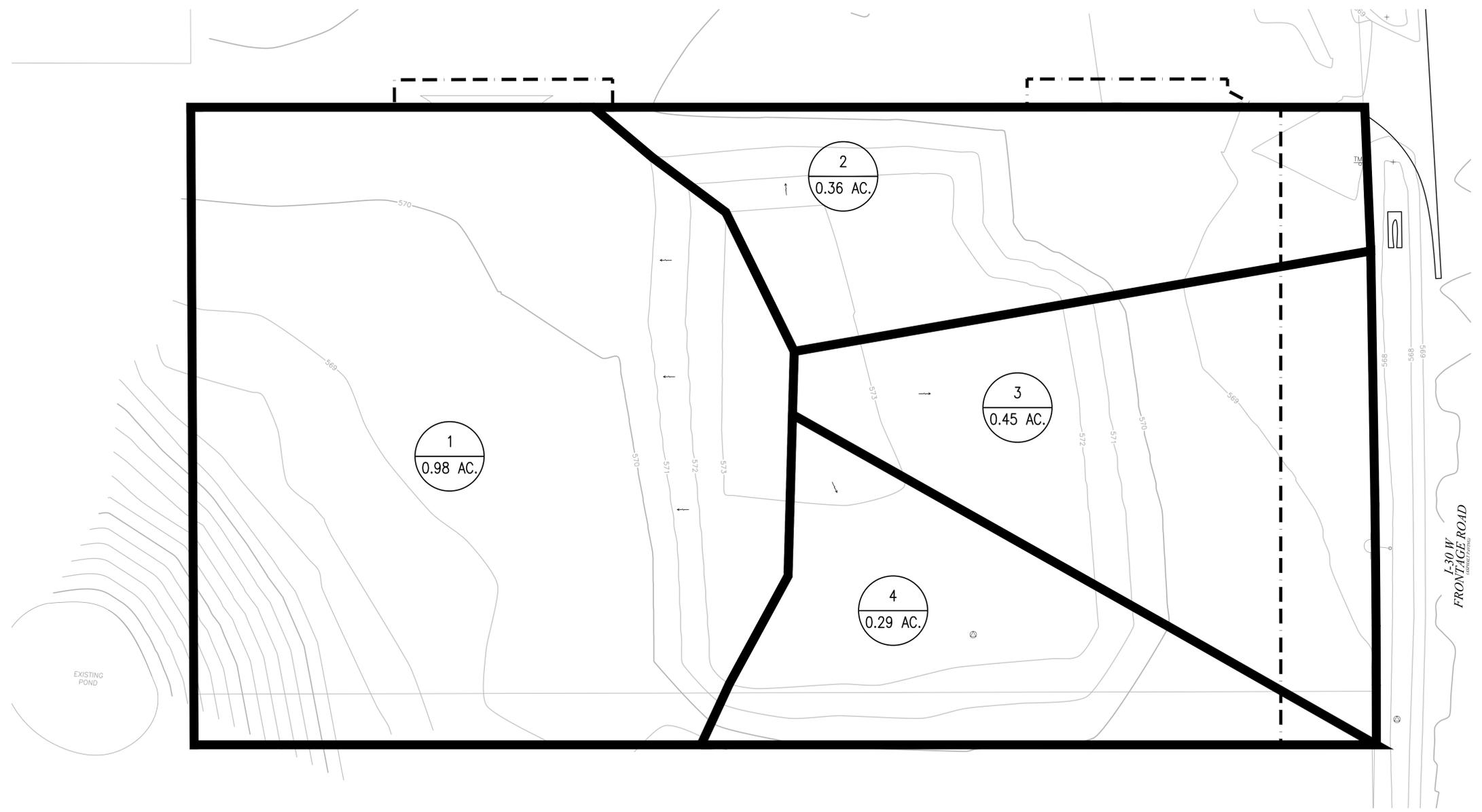
**912 I-30 FRONTAGE ROAD**



**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**EXISTING DRAINAGE AREAS**

**SHEET NUMBER**  
**C4.1**



**EXHIBIT LEGEND:**

- PROPERTY LINE
- LAND DISTURBANCE LIMITS
- STORM SEWER TRIBUTARY AREA LIMITS
- STORM SEWER STRUCTURE NUMBER
- TRIBUTARY DRAINAGE AREA
- EXISTING DRAINAGE FLOW DIRECTION

**TRIBUTARY AREA TABLE:**

TOTAL STORM SEWER TRIBUTARY AREA: 2.08 ACRES  
'C' VALUE (PARKS OR OPEN AREAS): 0.35

**NOTE:**  
STORMWATER RUNOFF COEFFICIENTS ARE TAKEN FROM THE CITY OF ROCKWALL, TX STANDARDS OF DESIGN AND CONSTRUCTION.

**MAXIMUM RELEASE RATE CALCULATIONS:**

AREA 1:  
Q = CIA  
C = 0.35 (PARKS OR OPEN AREAS)  
T<sub>c</sub> = 20 MIN  
I<sub>100</sub> = 8.3 IN/HR  
Q100 = (0.35)(8.3)(0.98) = 2.85 CFS

AREA 2:  
Q100 = (0.35)(8.3)(0.36) = 1.05 CFS

AREA 3:  
Q100 = (0.35)(8.3)(0.45) = 1.31 CFS

AREA 4:  
Q100 = (0.35)(8.3)(0.29) = 0.84 CFS

**5-YEAR, 10-YEAR, 25-YEAR RELEASE RATES**

Q = CIA  
C = 0.35 (PARKS OR OPEN AREAS)  
T<sub>c</sub> = 20 MIN  
I<sub>5</sub> = 4.9 IN/HR

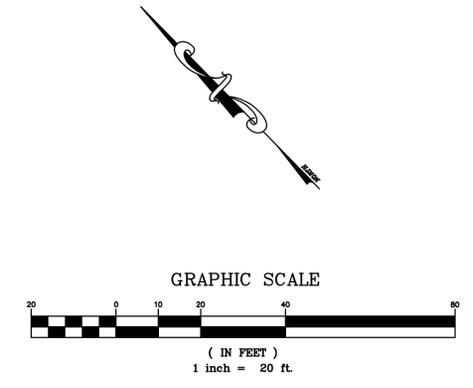
Q5 (AREA 1) = (0.35)(4.9)(0.98) = 1.68 CFS  
Q5 (AREA 2) = (0.35)(4.9)(0.36) = 0.62 CFS  
Q5 (AREA 3) = (0.35)(4.9)(0.45) = 0.77 CFS  
Q5 (AREA 4) = (0.35)(4.9)(0.29) = 0.50 CFS

I<sub>10</sub> = 5.9 IN/HR

Q10 (AREA 1) = (0.35)(5.9)(0.98) = 2.02 CFS  
Q10 (AREA 2) = (0.35)(5.9)(0.36) = 0.74 CFS  
Q10 (AREA 3) = (0.35)(5.9)(0.45) = 0.93 CFS  
Q10 (AREA 4) = (0.35)(5.9)(0.29) = 0.60 CFS

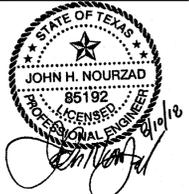
I<sub>25</sub> = 6.6 IN/HR

Q25 (AREA 1) = (0.35)(6.6)(0.98) = 2.26 CFS  
Q25 (AREA 2) = (0.35)(6.6)(0.36) = 0.83 CFS  
Q25 (AREA 3) = (0.35)(6.6)(0.45) = 1.04 CFS  
Q25 (AREA 4) = (0.35)(6.6)(0.29) = 0.67 CFS



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**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH  
**QUALITY CONTROL**  
LARRY DIEHL  
**DRAWN BY**  
MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

**ROCKWALL TEXAS**  
**912 I-30 FRONTAGE ROAD**



**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**STORMWATER MANAGEMENT PLAN**

**SHEET NUMBER**

**C4.2**

**EXHIBIT LEGEND:**

- PROPERTY LINE
- LAND DISTURBANCE LIMITS
- STORM SEWER TRIBUTARY AREA LIMITS
- 1 STORM SEWER STRUCTURE NUMBER
- 0.10 AC. TRIBUTARY DRAINAGE AREA
- 570 PROPOSED CONTOUR
- PROPOSED GRADING RIDGE
- PROPOSED DRAINAGE FLOW DIRECTION
- PROPOSED OVERLAND FLOOD ROUTE
- STM --- PROPOSED STORM SEWER
- PROPOSED STORM SEWER CATCH BASIN
- ⊙ PROPOSED STORM SEWER CLEAN OUT

**5-YR DETENTION POND VOLUME**

ELEVATION	CUMM. VOLUME	VOLUME	WSEL
563.15			
562.15	24,220		
561.15	21,582		
560.15	17,161	13,448	560.41
559.15	12,110		
558.15	7,059		
557.15	2,638		

**10-YR DETENTION POND VOLUME**

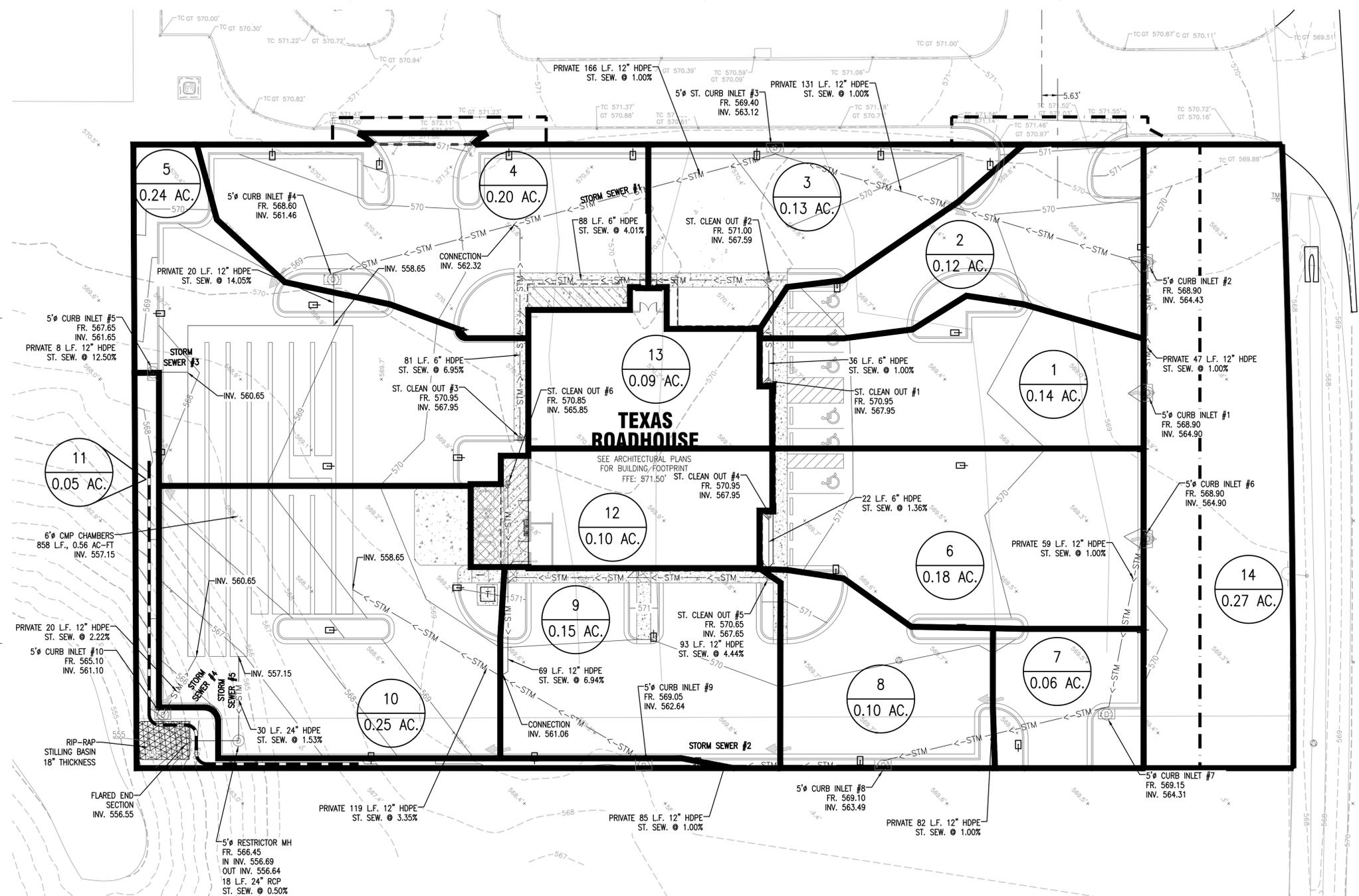
ELEVATION	CUMM. VOLUME	VOLUME	WSEL
563.15			
562.15	24,220		
561.15	21,582	17,456	561.22
560.15	17,161		
559.15	12,110		
558.15	7,059		
557.15	2,638		

**25-YR DETENTION POND VOLUME**

ELEVATION	CUMM. VOLUME	VOLUME	WSEL
563.15			
562.15	24,220		
561.15	21,582	18,932	561.55
560.15	17,161		
559.15	12,110		
558.15	7,059		
557.15	2,638		

**100-YR DETENTION POND VOLUME**

ELEVATION	CUMM. VOLUME	VOLUME	WSEL
563.15			
562.15	24,220	24,144	563.12
561.15	21,582		
560.15	17,161		
559.15	12,110		
558.15	7,059		
557.15	2,638		



**FUTURE CONDITIONS CALCULATIONS:**

C = 0.90  
Tc = 10 MIN  
I100 = 9.8 IN/HR  
Q100 = (0.90)(9.8)(1.81) = 15.96 CFS

**DURATION STORMS:**

MINUTES	I	Q
15	9.00	14.66
20	8.30	13.52
30	6.90	11.24
40	5.80	9.45
50	5.00	8.15
60	4.50	7.33
70	4.00	6.52
80	3.70	6.03
90	3.50	5.70
100	3.40	5.54
110	3.20	5.21

**MAXIMUM STORAGE VOLUME:**

10 MIN STORM	INFLOW = (10)(15.96 CFS)(60 SEC/MIN) = 9,576 CF OUTFLOW = (0.5)(20 MIN)(2.85 CFS)(60 SEC/MIN) = 1,710 CF = 7,866 CF
15 MIN STORM	INFLOW = (15)(14.66 CFS)(60 SEC/MIN) = 13,194 CF OUTFLOW = (0.5)(25 MIN)(2.85 CFS)(60 SEC/MIN) = 2,138 CF = 11,056 CF
20 MIN STORM	INFLOW = (20)(13.52 CFS)(60 SEC/MIN) = 16,224 CF OUTFLOW = (0.5)(30 MIN)(2.85 CFS)(60 SEC/MIN) = 2,565 CF = 13,659 CF
30 MIN STORM	INFLOW = (30)(11.24 CFS)(60 SEC/MIN) = 20,232 CF OUTFLOW = (0.5)(40 MIN)(2.85 CFS)(60 SEC/MIN) = 3,420 CF = 16,812 CF
40 MIN STORM	INFLOW = (40)(9.45 CFS)(60 SEC/MIN) = 22,680 CF OUTFLOW = (0.5)(50 MIN)(2.85 CFS)(60 SEC/MIN) = 4,275 CF = 18,405 CF
50 MIN STORM	INFLOW = (50)(8.15 CFS)(60 SEC/MIN) = 24,450 CF OUTFLOW = (0.5)(60 MIN)(2.85 CFS)(60 SEC/MIN) = 5,130 CF = 19,320 CF

**MAXIMUM RELEASE RATES AND STORAGE VOLUMES**

60 MIN STORM	INFLOW = (60)(7.33 CFS)(60 SEC/MIN) = 26,388 CF OUTFLOW = (0.5)(70 MIN)(2.85 CFS)(60 SEC/MIN) = 12,403 CF = 13,985 CF
70 MIN STORM	INFLOW = (70)(6.52 CFS)(60 SEC/MIN) = 27,384 CF OUTFLOW = (0.5)(80 MIN)(2.85 CFS)(60 SEC/MIN) = 12,544 CF = 14,840 CF
80 MIN STORM	INFLOW = (80)(6.03 CFS)(60 SEC/MIN) = 28,944 CF OUTFLOW = (0.5)(90 MIN)(2.85 CFS)(60 SEC/MIN) = 12,249 CF = 16,695 CF
90 MIN STORM	INFLOW = (90)(5.70 CFS)(60 SEC/MIN) = 30,780 CF OUTFLOW = (0.5)(100 MIN)(2.85 CFS)(60 SEC/MIN) = 12,230 CF = 18,550 CF
100 MIN STORM	INFLOW = (100)(5.54 CFS)(60 SEC/MIN) = 33,240 CF OUTFLOW = (0.5)(110 MIN)(2.85 CFS)(60 SEC/MIN) = 12,335 CF = 20,905 CF
110 MIN STORM	INFLOW = (110)(5.21 CFS)(60 SEC/MIN) = 34,386 CF OUTFLOW = (0.5)(120 MIN)(2.85 CFS)(60 SEC/MIN) = 12,426 CF = 21,960 CF

**ORIFICE CALCULATIONS:**

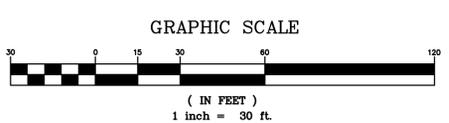
5-YEAR:  
1-6" DIA  
Q = CA(2GH)<sup>1.5</sup> = (0.52)(0.20)((2)(32.2)(3.52))<sup>1.5</sup> = 1.54 CFS

10-YEAR:  
1-6" DIA  
Q = (0.52)(0.20)((2)(32.2)(4.33))<sup>1.5</sup> = 1.71 CFS

25-YEAR:  
1-6" DIA  
Q = (0.52)(0.20)((2)(32.2)(4.66))<sup>1.5</sup> = 1.77 CFS

100-YEAR:  
1-6" DIA  
Q = (0.52)(0.20)((2)(32.2)(6.23))<sup>1.5</sup> = 2.05 CFS

1-3" DIA  
Q = (0.52)(0.05)((2)(32.2)(5.05))<sup>1.5</sup> = 0.46 CFS  
2.51 CFS



DRAINAGE AREA CALCULATION TABLE

Drainage Area Calculation Table								
Area ID	Drainage Area (acres)	Runoff Coeff. C	C*A	Time of Concentration Tc (min)	Design Storm Frequency (yrs)	Intensity I (in/hr)	Storm Runoff Q (cfs)	Drains To/ Remarks
1	0.14	0.90	0.126	10	100	9.8	1.23	Drains to CI#1 and ultimately the underground detention
2	0.12	0.90	0.108	10	100	9.8	1.06	Drains to CI#2 and ultimately the underground detention
3	0.13	0.90	0.117	10	100	9.8	1.15	Drains to CI#3 and ultimately the underground detention
4	0.20	0.90	0.180	10	100	9.8	1.76	Drains to CI#4 and ultimately the underground detention
5	0.24	0.90	0.216	10	100	9.8	2.12	Drains to CI#5 and ultimately the underground detention
6	0.18	0.90	0.162	10	100	9.8	1.59	Drains to CI#6 and ultimately the underground detention
7	0.06	0.90	0.054	10	100	9.8	0.53	Drains to CI#7 and ultimately the underground detention
8	0.10	0.90	0.090	10	100	9.8	0.88	Drains to CI#8 and ultimately the underground detention
9	0.15	0.90	0.135	10	100	9.8	1.32	Drains to CI#9 and ultimately the underground detention
10	0.25	0.90	0.225	10	100	9.8	2.21	Drains to CI#10 and ultimately the underground detention
11	0.05	0.90	0.045	10	100	9.8	0.44	Drains to the existing pond to the west of the site.
12	0.10	0.90	0.090	10	100	9.8	0.88	Drains to Storm Sewer #2 (Curb Inlet #9 - Detention)
13	0.09	0.90	0.081	10	100	9.8	0.79	Drains to Storm Sewer #1 (Curb Inlet #3 - Curb Inlet #4)
14	0.27	0.90	0.243	10	100	9.8	2.38	Drains to R.O.W.

100-YEAR INLET CAPACITY

i = 9.81 in/hr (100-YEAR, 10 MIN)

Casting Information  
1 Neenah R-3065-A Area (ft²) = 0.9 Perimeter (ft) = 4.5 Allowable % Capacity 100%

Structure ID	Area ID	Area (ac)	C-value <sup>5</sup>	Q (cfs)	Casting	Ponding Depth (H) (ft)	# OF INLETS	Q(Orifice) <sup>3</sup> (cfs)	Q(weir) <sup>4</sup> (cfs)	Q(Control) (cfs)	Result
CI1	1	0.140	0.90	1.24	1	0.50	1	3.06	5.25	3.06	OK
CI2	2	0.120	0.90	1.06	1	0.50	1	3.06	5.25	3.06	OK
CI3	3	0.130	0.90	1.15	1	0.85	1	4.00	11.64	4.00	OK
CI4	4	0.290	0.90	2.56	1	0.35	1	2.56	3.07	2.56	OK
CI5	5	0.240	0.90	2.12	1	0.40	1	2.74	3.76	2.74	OK
CI6	6	0.180	0.90	1.59	1	0.50	1	3.06	5.25	3.06	OK
CI7	7	0.060	0.90	0.53	1	0.45	1	2.91	4.48	2.91	OK
CI8	8	0.100	0.90	0.88	1	0.45	1	2.91	4.48	2.91	OK
CI9	9	0.150	0.90	1.32	1	0.40	1	2.74	3.76	2.74	OK
CI10	10	0.250	0.90	2.21	1	0.50	1	3.06	5.25	3.06	OK

STORM SEWER TABLE FOR CURB INLET #1-UNDERGROUND DETENTION

Line ID	Line Length (ft)	Incr. Area (ac)	Total Area (ac)	Runoff Coeff. (C)	Incr C x A	Total C x A	Adnl Flow (cfs)	Total Flow (cfs)	Capac Full (cfs)	Veloc (ft/s)	Pipe Size (in)	Pipe Slope (%)	Inv Elev Dn (ft)	Inv Elev Up (ft)	HGL Dn (ft)	HGL Up (ft)	Grnd/Rim Dn (ft)	Grnd/Rim Up (ft)
CI4-Det	20.080	0.20	0.68	0.90	0.18	0.61	1.76	5.99	13.32	11.50	12	13.99	558.65	561.46	559.15	562.41	567.00	568.60
CI3-CI4	166.182	0.22	0.48	0.90	0.20	0.43	1.94	4.23	3.56	5.39	12	1.00	561.46	563.12	562.46	564.81	568.60	569.40
CI2-CI3	129.133	0.12	0.26	0.90	0.11	0.23	1.06	2.29	0.00	3.85	12	1.01	563.12	564.43	563.91	565.08	569.40	568.90
CI1-CI2	46.000	0.14	0.14	0.90	0.13	0.13	1.23	1.23	0.00	2.85	12	1.02	564.43	564.90	565.08	565.37	568.90	568.90

STORM SEWER TABLE FOR CURB INLET #5-UNDERGROUND DETENTION

Line ID	Line Length (ft)	Incr. Area (ac)	Total Area (ac)	Runoff Coeff. (C)	Incr C x A	Total C x A	Adnl Flow (cfs)	Total Flow (cfs)	Capac Full (cfs)	Veloc (ft/s)	Pipe Size (in)	Pipe Slope (%)	Inv Elev Dn (ft)	Inv Elev Up (ft)	HGL Dn (ft)	HGL Up (ft)	Grnd/Rim Dn (ft)	Grnd/Rim Up (ft)
CI5-Det	8.250	0.24	0.24	0.90	0.22	0.22	2.12	2.12	12.40	4.14	12	12.12	560.65	561.65	561.27	562.27	567.85	567.65

STORM SEWER TABLE FOR CURB INLET #6-UNDERGROUND DETENTION

Line ID	Line Length (ft)	Incr. Area (ac)	Total Area (ac)	Runoff Coeff. (C)	Incr C x A	Total C x A	Adnl Flow (cfs)	Total Flow (cfs)	Capac Full (cfs)	Veloc (ft/s)	Pipe Size (in)	Pipe Slope (%)	Inv Elev Dn (ft)	Inv Elev Up (ft)	HGL Dn (ft)	HGL Up (ft)	Grnd/Rim Dn (ft)	Grnd/Rim Up (ft)
CI9-Det	118.550	0.25	0.59	0.90	0.23	0.53	2.20	5.20	6.53	8.04	12	3.37	558.65	562.64	559.32	563.57	569.30	569.05
CI8-CI9	84.856	0.10	0.34	0.90	0.09	0.31	0.88	3.00	3.56	4.38	12	1.00	562.64	563.49	563.57	564.23	569.05	569.10
CI7-CI8	82.415	0.06	0.24	0.90	0.05	0.22	0.53	2.12	3.55	3.76	12	0.99	563.49	564.31	564.23	564.93	569.10	569.15
CI6-CI7	58.618	0.18	0.18	0.90	0.16	0.16	1.59	1.59	3.57	3.41	12	1.01	564.31	564.90	564.93	565.43	569.15	568.90

STORM SEWER TABLE FOR CURB INLET #10-UNDERGROUND DETENTION

Line ID	Line Length (ft)	Incr. Area (ac)	Total Area (ac)	Runoff Coeff. (C)	Incr C x A	Total C x A	Adnl Flow (cfs)	Total Flow (cfs)	Capac Full (cfs)	Veloc (ft/s)	Pipe Size (in)	Pipe Slope (%)	Inv Elev Dn (ft)	Inv Elev Up (ft)	HGL Dn (ft)	HGL Up (ft)	Grnd/Rim Dn (ft)	Grnd/Rim Up (ft)
CI10-Det	20.260	0.25	0.25	0.90	0.23	0.23	2.21	2.21	5.31	4.18	12	2.22	560.65	561.10	561.29	561.74	566.74	565.10

STORM SEWER TABLE FOR UNDERGROUND DETENTION TO OUTFALL

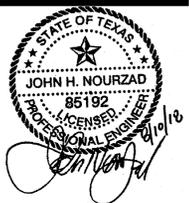
Line ID	Line Length (ft)	Incr. Area (ac)	Total Area (ac)	Runoff Coeff. (C)	Incr C x A	Total C x A	Adnl Flow (cfs)	Total Flow (cfs)	Capac Full (cfs)	Veloc (ft/s)	Pipe Size (in)	Pipe Slope (%)	Inv Elev Dn (ft)	Inv Elev Up (ft)	HGL Dn (ft)	HGL Up (ft)	Grnd/Rim Dn (ft)	Grnd/Rim Up (ft)
Restrict MH-Outfall	18.000	0.00	0.00	0.90	0.00	0.00	2.51	2.51	16.00	3.57	24	0.50	556.55	556.64	557.10	557.19	555.50	566.45
Det-Restrict MH	29.750	0.00	0.00	0.90	0.00	0.00	14.65	14.65	28.13	5.51	24	1.55	556.69	557.15	558.66	558.53	566.45	566.95

PROJECT TEAM

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05/01/17	SITE PLAN SUBMITTAL
05/19/17	ENGINEERING REVIEW
06/27/17	PERMIT SET
07/19/17	PERMIT/BDI SET
07/20/17	ENGINEERING REVIEW
08/04/17	ENGINEERING REVIEW
10/11/17	STORMWATER REVISIONS
11/07/17	STORMWATER REVISIONS
11/26/17	CONSTRUCTION SET
12/15/17	GRADING REVISIONS
01/05/18	OWNER REVISIONS
08/07/18	AS-BUILT



PROFESSIONAL IN CHARGE  
JOHN NOURZAD  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

PROJECT MANAGER  
JEFF RATH

QUALITY CONTROL  
LARRY DIEHL  
DRAWN BY  
MITCH HEFFERNAN

PROJECT NAME  
**TEXAS ROADHOUSE**

ROCKWALL  
TEXAS  
912 I-30 FRONTAGE ROAD



PROJECT NUMBER  
201512910

SHEET TITLE  
**STORMWATER MANAGEMENT PLAN**

SHEET NUMBER  
**C4.3**

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01/05/18	OWNER REVISIONS
08/07/18	AS-BUILT



**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH

**QUALITY CONTROL**  
LARRY DIEHL

**DRAWN BY**  
MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

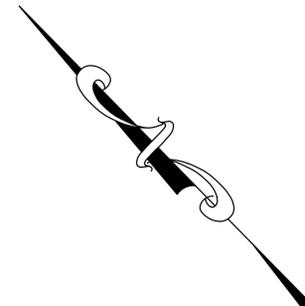
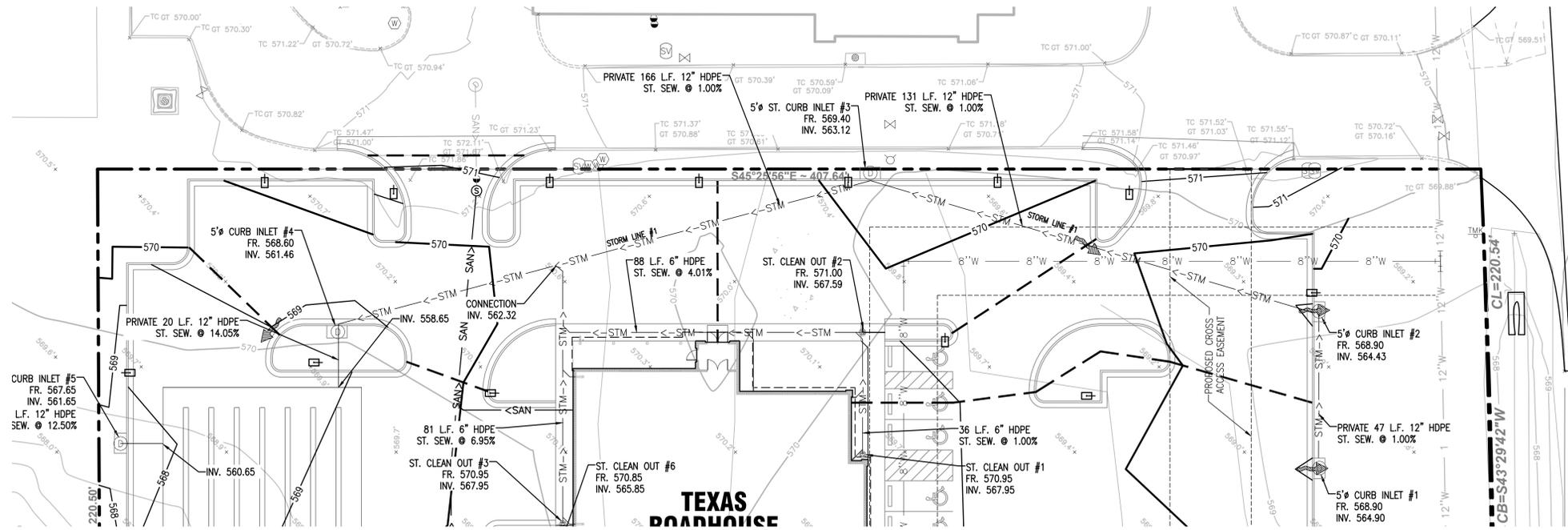
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912 I-30 FRONTAGE ROAD



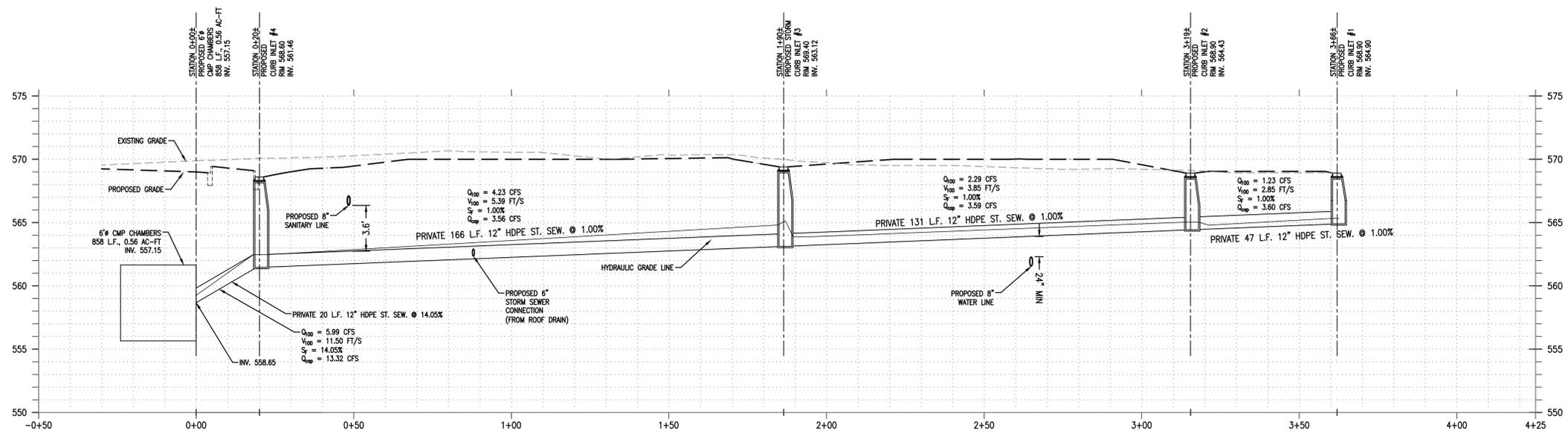
**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**STORM SEWER PROFILES**

**SHEET NUMBER**  
**C4.4**



**PLAN VIEW**  
1" = 20'



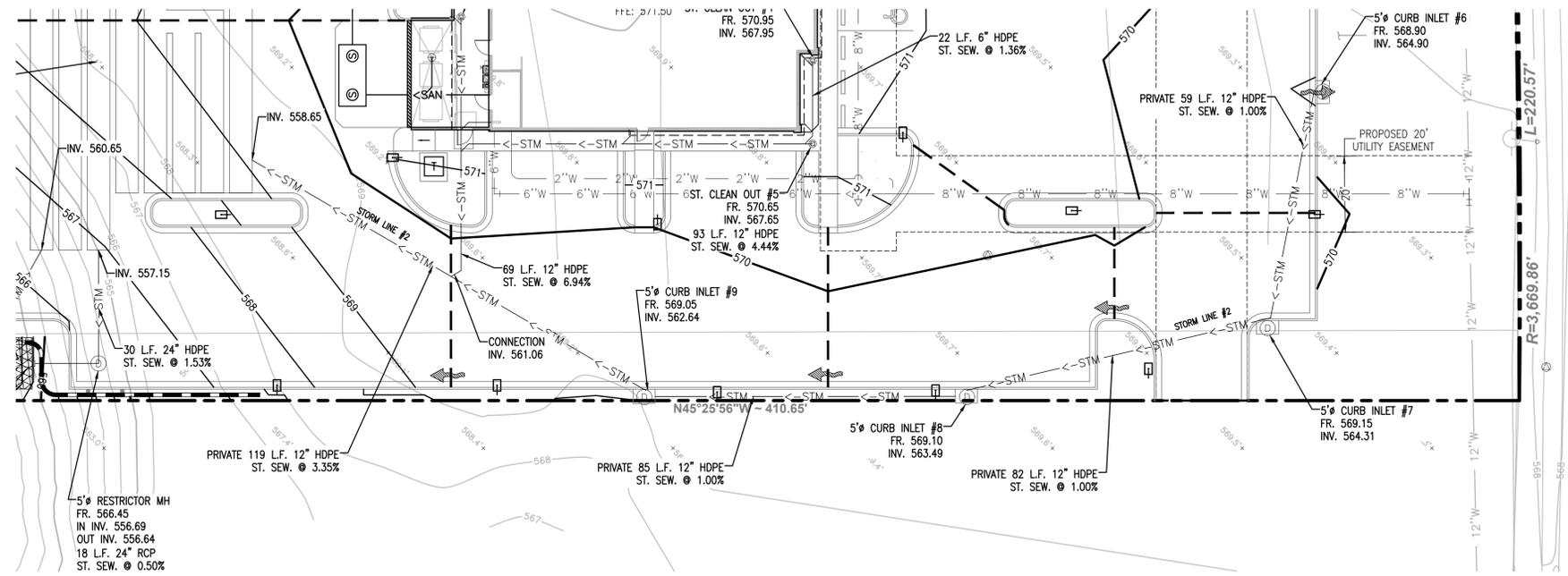
**PROPOSED STORM SEWER PROFILE # 1**

**PROFILE VIEW**  
H: 1" = 10'  
V: 1" = 2'

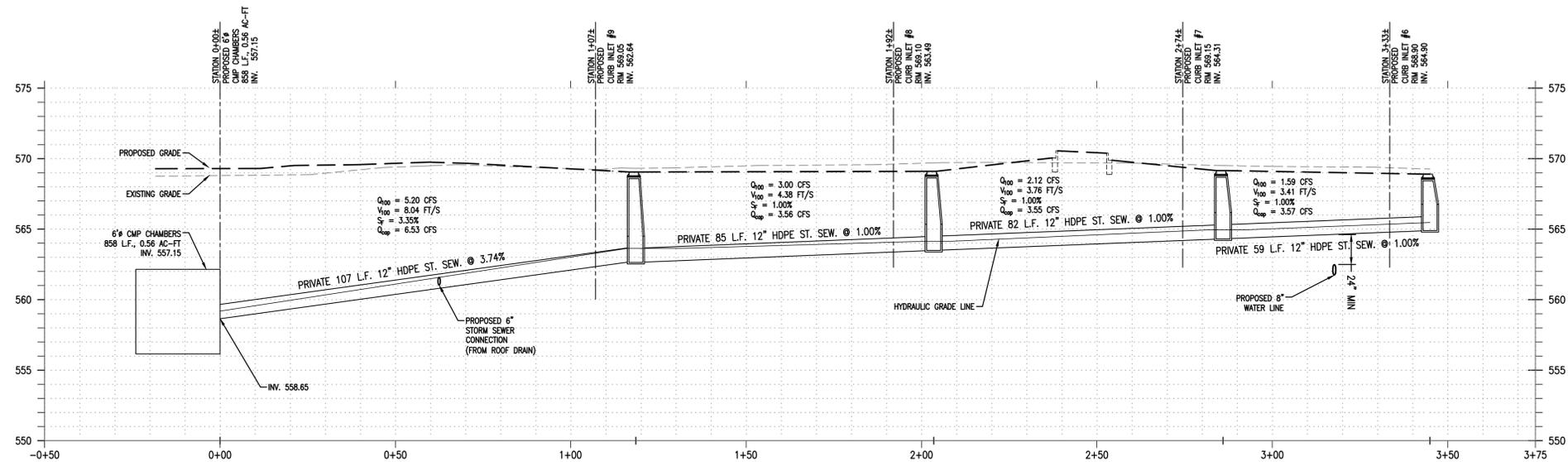
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01/05/18	OWNER REVISIONS
08/07/18	AS-BUILT



PLAN VIEW  
1" = 20'



PROPOSED STORM  
SEWER PROFILE # 2

PROFILE VIEW  
H: 1" = 10'  
V: 1" = 2'



**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH

**QUALITY CONTROL**  
LARRY DIEHL

**DRAWN BY**  
MITCH HEFFERNAN

**PROJECT NAME**

**TEXAS  
ROADHOUSE**

**ROCKWALL  
TEXAS**

**912 I-30 FRONTAGE ROAD**



**PROJECT NUMBER**

201512910

**SHEET TITLE**

**STORM SEWER  
PROFILES**

**SHEET NUMBER**

**C4.5**

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**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192  
**PROJECT MANAGER**  
JEFF RATH  
**QUALITY CONTROL**  
LARRY DIEHL  
**DRAWN BY**  
MITCH HEFFERNAN

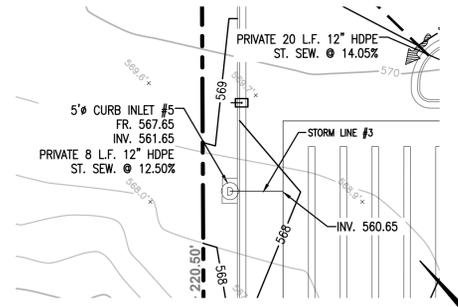
**PROJECT NAME**  
**TEXAS ROADHOUSE**  
**ROCKWALL TEXAS**  
**912 I-30 FRONTAGE ROAD**



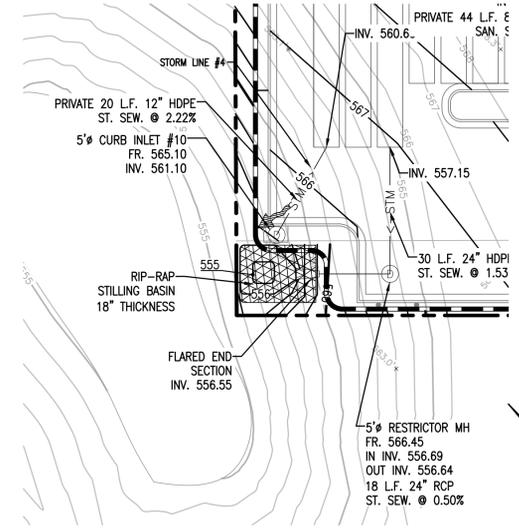
**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**STORM SEWER PROFILES**

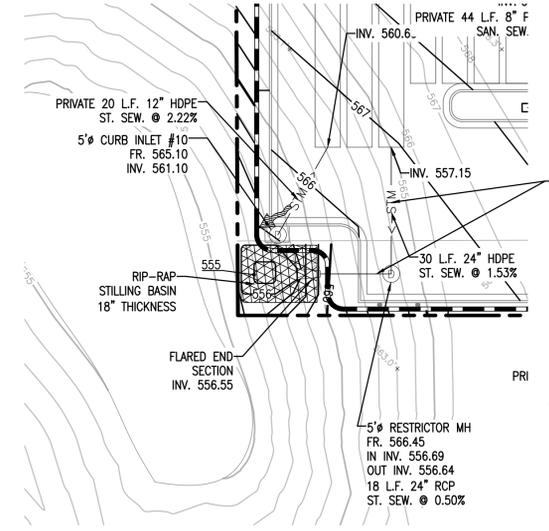
**SHEET NUMBER**  
**C4.6**



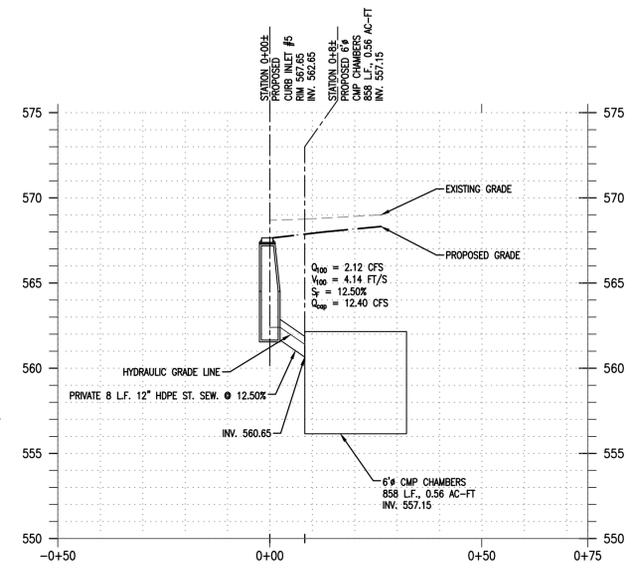
**PLAN VIEW**  
1" = 20'



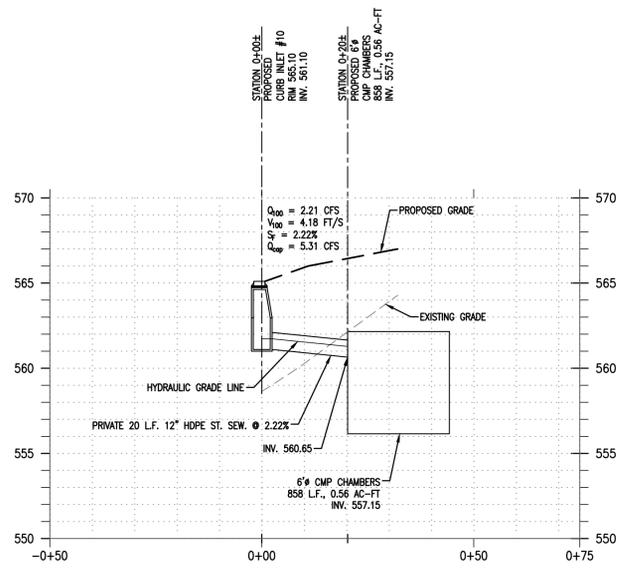
**PLAN VIEW**  
1" = 20'



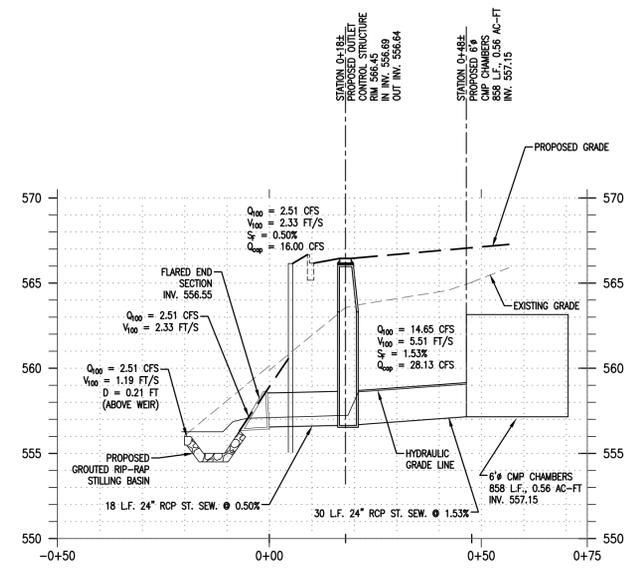
**PLAN VIEW**  
1" = 20'



**PROPOSED STORM SEWER PROFILE # 3**  
**PROFILE VIEW**  
H: 1" = 10'  
V: 1" = 2'



**PROPOSED STORM SEWER PROFILE # 4**  
**PROFILE VIEW**  
H: 1" = 10'  
V: 1" = 2'

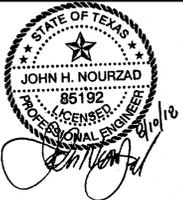


**PROPOSED STORM SEWER PROFILE # 5**  
**PROFILE VIEW**  
H: 1" = 10'  
V: 1" = 2'

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PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH

**QUALITY CONTROL**  
LARRY DIEHL

**DRAWN BY**  
MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

**ROCKWALL TEXAS**  
**912 I-30 FRONTAGE ROAD**



**PROJECT NUMBER**  
201512910

**SHEET TITLE**

**INITIAL GRADING PLAN**

**SHEET NUMBER**

**C4.7**

**PROPOSED LEGEND:**

- PROPERTY LINE
- PROPOSED CONTOUR (TO BE STRIPPED TO DURING INITIAL GRADING PHASE)
- EXISTING CONTOUR (PRIOR TO INITIAL GRADING PHASE)
- PROPOSED SPOT GRADE
- PROPOSED DRAINAGE FLOW DIRECTION



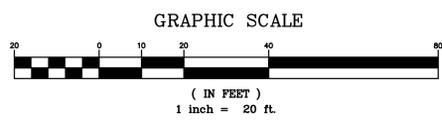
**GENERAL GRADING NOTES:**

1. ALL GRADING AND SITE PREPARATION WORK SHALL CONFORM WITH THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
2. CONTRACTOR SHALL CAREFULLY PRESERVE ALL SITE BENCHMARKS AND REFERENCE POINTS DURING CONSTRUCTION OPERATIONS.
3. CONTRACTOR SHALL PROVIDE A MINIMUM OF 95% STANDARD DENSITY COMPACTION USING A SHEEP'S FOOT ROLLER.
4. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST FORTY-EIGHT (48) HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED SITE IMPROVEMENTS SHOWN ON THE PLANS.
5. CONTRACTOR SHALL INSTALL APPROPRIATE TREE PROTECTION MEASURES PRIOR TO COMMENCEMENT OF SITE GRADING OPERATIONS.
6. CONTRACTOR SHALL ENSURE POSITIVE SURFACE DRAINAGE. AREAS OF SURFACE PONDING SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

7. CONTRACTOR SHALL UTILIZE CARE WHEN WORKING NEAR EXISTING UTILITIES TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES NOT NOTED TO BE REMOVED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
8. CONTRACTOR SHALL REPAIR AT HIS EXPENSE ANY DAMAGE TO EXISTING ASPHALT, CONCRETE, CURBS, SIDEWALKS, ETC. RESULTING FROM CONSTRUCTION TRAFFIC AND/OR OPERATIONS. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
9. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OUTSIDE OF CONSTRUCTION LIMITS TO ORIGINAL CONDITION OR BETTER.
10. EXCAVATION SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. SHORING SHALL BE IN ACCORDANCE WITH ALL O.S.H.A AND LOCAL REGULATIONS.
11. ALL STRUCTURE BENCH WALLS SHALL BE SHAPED AND FORMED FOR A CLEAN TRANSITION WITH PROPER HYDRAULICS TO ALLOW THE SMOOTH CONVEYANCE OF FLOWS THROUGH THE MANHOLE OR BOX INLET. THE BENCH WALL SHALL FORM A DEFINED CHANNEL, TO A MINIMUM HEIGHT OF 80-PERCENT OF THE INSIDE DIAMETER OF THE INLET AND OUTLET PIPES TO FORM A 'U' SHAPED CHANNEL, CONSTRUCTED AT A MINIMUM 1/4-INCH PER FOOT SLOPE TO THE MANHOLE WALL.
12. SEE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

**FLOOD NOTE:**

PROJECT SITE DOES NOT LIE WITHIN A 100 YEAR FLOOD HAZARD AREA AND IS LOCATED IN ZONE "X" AS SHOWN ON THE ABOVE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 48397C0040L WITH AN EFFECTIVE DATE OF SEPTEMBER 26, 2008.



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05/01/17	SITE PLAN SUBMITTAL
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01/05/18	OWNER REVISIONS
08/07/18	AS-BUILT



**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH

**QUALITY CONTROL**  
LARRY DIEHL

**DRAWN BY**  
MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

**ROCKWALL TEXAS**  
**912 I-30 FRONTAGE ROAD**



**PROJECT NUMBER**  
201512910

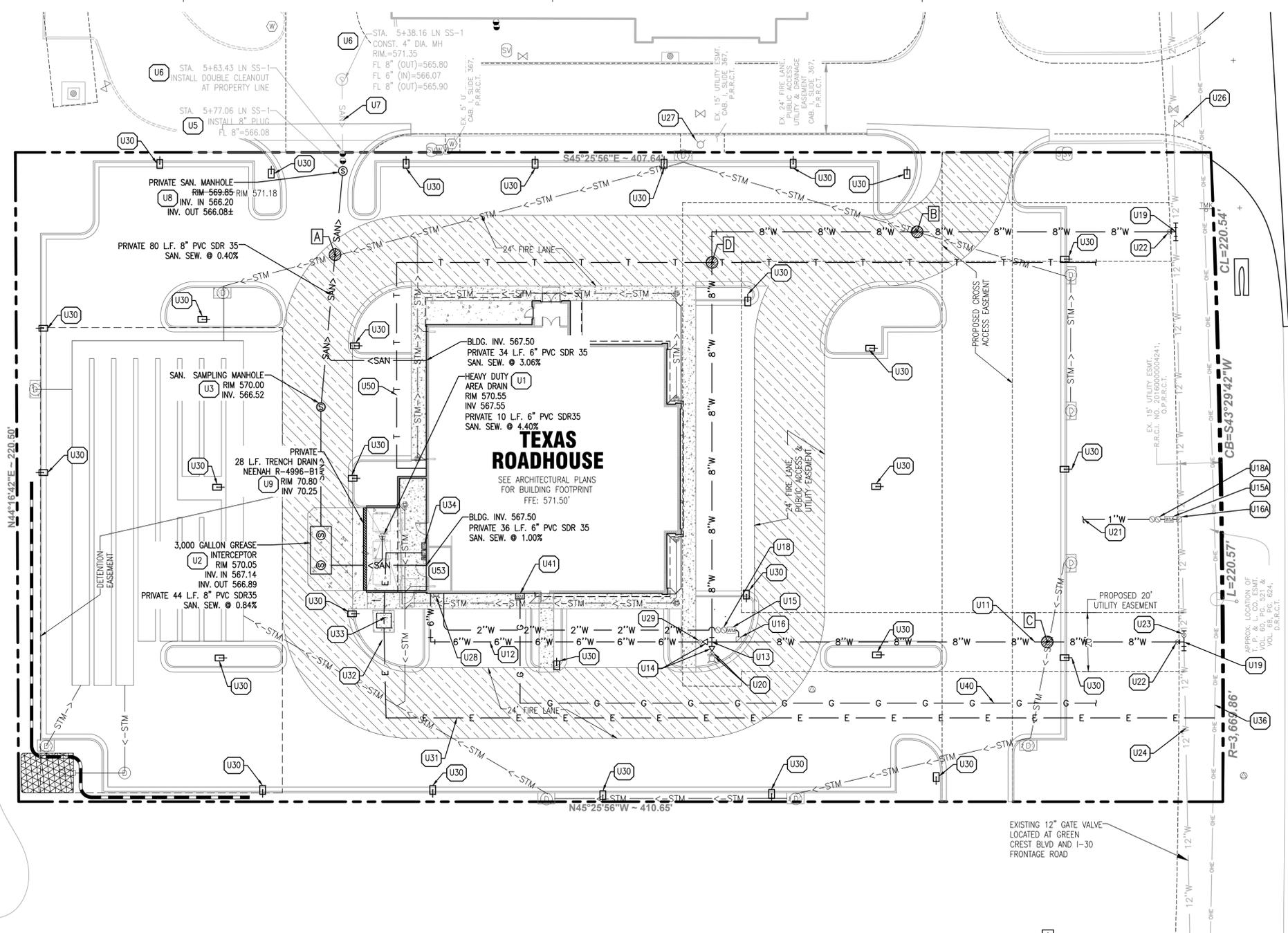
**SHEET TITLE**  
**UTILITY PLAN**

**SHEET NUMBER**  
**C5.0**

**PROPOSED LEGEND:**

- PROPERTY LINE
- STM --- PROPOSED STORM SEWER
- SAN --- PROPOSED SANITARY SEWER
- 6"W --- PROPOSED 6" FIRE PROTECTION WATER LINE
- 8"W --- PROPOSED 8" FIRE PROTECTION WATER LINE
- 2"W --- PROPOSED 2" DOMESTIC WATER SERVICE
- 1"W --- PROPOSED 1" IRRIGATION WATER SERVICE
- E --- PROPOSED ELECTRIC SERVICE LINE
- G --- PROPOSED GAS SERVICE LINE
- T --- PROPOSED TELEPHONE SERVICE LINE
- [Symbol] PROPOSED STORM SEWER STRUCTURE
- [Symbol] PROPOSED STORM SEWER STRUCTURE WITH CLOSED LID
- [Symbol] PROPOSED STORM SEWER CLEAN OUT
- [Symbol] HEAVY DUTY AREA DRAIN
- [Symbol] PROPOSED SANITARY SEWER CLEAN OUT
- [Symbol] PROPOSED SANITARY SEWER GREASE INTERCEPTOR
- [Symbol] PROPOSED SANITARY SEWER SAMPLING WELL
- [Symbol] PROPOSED TRENCH DRAIN
- [Symbol] PROPOSED WATER SERVICE, VALVE AND VALVE BOX
- [Symbol] PROPOSED GATE VALVE AND VALVE BOX
- [Symbol] PROPOSED WATER METER AND VAULT
- [Symbol] PROPOSED FIRE HYDRANT
- [Symbol] PROPOSED FIRE DEPARTMENT CONNECTION (FDC)
- [Symbol] PROPOSED BACKFLOW PREVENTOR
- [Symbol] PROPOSED LIGHT POLE
- [Symbol] PROPOSED GAS METER
- [Symbol] PROPOSED ELECTRIC METER, CT CABINET AND DISCONNECT
- [Symbol] PROPOSED TRANSFORMER

NOTE: SEE SHEET C1.0 FOR EXISTING LEGEND



**GENERAL UTILITY NOTES:**

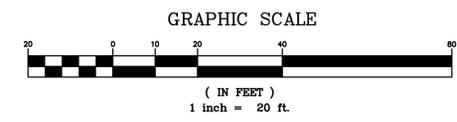
- CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST FORTY-EIGHT (48) HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED SITE IMPROVEMENTS SHOWN ON THE PLANS.
- CONTRACTOR SHALL UTILIZE CARE WHEN WORKING NEAR EXISTING UTILITIES TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES NOT NOTED TO BE REMOVED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
- CONTRACTOR SHALL EXCAVATE AND VERIFY IN FIELD ALL EXISTING UTILITY LOCATIONS, SIZES, CONDITIONS AND ELEVATIONS AT PROPOSED POINTS OF CONNECTION PRIOR TO COMMENCING ANY UNDERGROUND CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO PROCEEDING WITH CONSTRUCTION.
- ALL PROPOSED CONNECTIONS TO EXISTING UTILITY STRUCTURES OR PIPING SHALL BE IN ACCORDANCE WITH THE APPLICABLE GOVERNING AUTHORITY REQUIREMENTS AND SPECIFICATIONS.
- CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ALL EXISTING SEWER SYSTEMS DURING CONSTRUCTION OPERATIONS AS NECESSARY TO PREVENT SILT OR DEBRIS ACCUMULATION.
- SEE THE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION AND REQUIREMENTS INCLUDING ALL PIPE MATERIAL AND JOINT SPECIFICATIONS.

**UTILITY KEY NOTES:**

- U1 PROPOSED ZURN Z505 HEAVY DUTY AREA DRAIN WITH REMOVABLE SOLID COVER OPTION-SC TO CONNECT TO SANITARY SEWER SYSTEM (COORDINATE WITH ARCHITECTURAL AND PLUMBING PLANS)
- U2 PROPOSED 3,000 GALLON SANITARY SEWER GREASE INTERCEPTOR (SEE PLUMBING PLANS FOR ADDITIONAL INFORMATION AND DETAIL)
- U3 PROPOSED SANITARY SEWER SAMPLING WELL (SEE PLUMBING PLANS FOR ADDITIONAL INFORMATION AND DETAIL)
- U5 CONNECT PROPOSED 8" SANITARY SEWER TO EXISTING 8" SANITARY SEWER PER LOCAL CODES (CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND ELEVATION OF EXISTING SANITARY INVERT PRIOR TO INSTALLING PROPOSED SANITARY SEWER LINES)
- U6 EXISTING SANITARY SEWER STRUCTURE TO REMAIN
- U7 EXISTING SANITARY SEWER LINE TO REMAIN
- U8 PROPOSED SANITARY SEWER MANHOLE PER NCTCOG 4TH EDITION STANDARDS AND CITY OF ROCKWALL STANDARDS
- U9 PROPOSED NEENAH R-4996-A1 TRENCH DRAIN WITH CLOSED LID AND BOTTOM CONNECTION (CONTRACTOR TO CONNECT BOTTOM CONNECTION TO PROPOSED SANITARY LINE)
- U11 PROPOSED 8" D.I.P. CLASS 53 FIRE PROTECTION WATER SERVICE LINE
- U12 PROPOSED 6" D.I.P. CLASS 53 FIRE PROTECTION WATER SERVICE LINE
- U13 PROPOSED 8"x8"x6" D.I. CROSS
- U14 PROPOSED 8"x6" D.I. REDUCER
- U15 PROPOSED 2" WATER METER AND METER VAULT PER LOCAL CODES
- U15A PROPOSED 1" WATER METER AND METER VAULT PER LOCAL CODES
- U16 PROPOSED 2" DOMESTIC WATER SERVICE CONNECTION PER LOCAL CODES
- U16A PROPOSED 1" DOMESTIC WATER SERVICE CONNECTION PER LOCAL CODES
- U18 PROPOSED 2" DOMESTIC BACKFLOW PREVENTION DEVICE WITH DOUBLE CHECK PER LOCAL CODES
- U18A PROPOSED 1" DOMESTIC BACKFLOW PREVENTION DEVICE WITH DOUBLE CHECK PER LOCAL CODES
- U19 PROPOSED PRESSURE 12"x8" CUT IN TEE WITH SOLID SLEEVE CONNECTIONS PER LOCAL CODES
- U20 PROPOSED FIRE HYDRANT AND AUXILIARY VALVE PER LOCAL CODES
- U21 PROPOSED 1" TYPE K COPPER IRRIGATION WATER LINE STUB
- U22 PROPOSED 8" VALVE

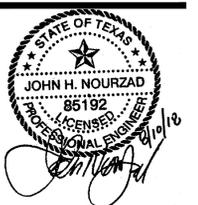
**UTILITY CROSSINGS:**

- A BOTTOM OF PROPOSED 8" SANITARY SEWER = 566.2' ±  
TOP OF PROPOSED 12" STORM SEWER = 563.0' ±  
VERTICAL SEPARATION = 3.2'
- B BOTTOM OF PROPOSED 12" STORM SEWER = 564.3' ±  
TOP OF PROPOSED 8" WATER LINE = 562.3' ±  
VERTICAL SEPARATION = 2.0'
- C BOTTOM OF PROPOSED 12" STORM SEWER = 564.5' ±  
TOP OF PROPOSED 8" WATER LINE = 562.5' ±  
VERTICAL SEPARATION = 2.0'
- D BOTTOM OF PROPOSED TELEPHONE LINE = 567.2' ±  
TOP OF PROPOSED 8" WATER LINE = 566.2' ±  
VERTICAL SEPARATION = 1.0'



**ISSUE/REVISION RECORD**

DATE	DESCRIPTION
12/19/16	SITE PLAN
01/23/17	SITE PLAN
01/27/17	SITE PLAN SUBMITTAL
04/07/17	SITE PLAN SUBMITTAL
04/27/17	COORDINATION SET
05/01/17	SITE PLAN SUBMITTAL
05/19/17	ENGINEERING REVIEW
06/27/17	PERMIT SET
07/19/17	PERMIT/BID SET
07/20/17	ENGINEERING REVIEW
08/04/17	ENGINEERING REVIEW
10/11/17	STORMWATER REVISIONS
11/07/17	STORMWATER REVISIONS
11/20/17	CONSTRUCTION SET
12/13/17	GRADING REVISIONS
01/05/18	OWNER REVISIONS
08/07/18	AS-BUILT



**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

**PROJECT MANAGER**  
JEFF RATH

**QUALITY CONTROL**  
LARRY DIEHL

**DRAWN BY**  
MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

**ROCKWALL TEXAS**

**912 I-30 FRONTAGE ROAD**



**PROJECT NUMBER**  
201512910

**SHEET TITLE**  
**STORMWATER POLLUTION PREVENTION PLAN**

**SHEET NUMBER**  
**C6.0**

**PROPOSED LEGEND:**

- PROPERTY LINE
- 50 --- PROPOSED CONTOUR
- LAND DISTURBANCE LIMITS (SEE DISTURBED AREA TABLE)
- SF --- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION INSERT
- SW3 --- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- SW4 --- PROPOSED CONCRETE WASHOUT (SUGGESTED LOCATION)
- SW5 --- PROPOSED CONTRACTOR STAGING AREA (SUGGESTED LOCATION)
- SW6 --- PROPOSED TEMPORARY TOPSOIL STOCKPILE (SUGGESTED LOCATION)
- SW8 --- PROPOSED EROSION CONTROL BLANKET
- SW9 --- PROPOSED RIP-RAP
- PROPOSED GRADING RIDGE LINE
- PROPOSED DRAINAGE FLOW DIRECTION
- PROPOSED OVERLAND FLOOD ROUTE
- PROPOSED STORM SEWER STRUCTURES
- STM> --- PROPOSED STORM SEWER
- PROPOSED LIGHT POLE

**SWPPP KEY NOTES:**

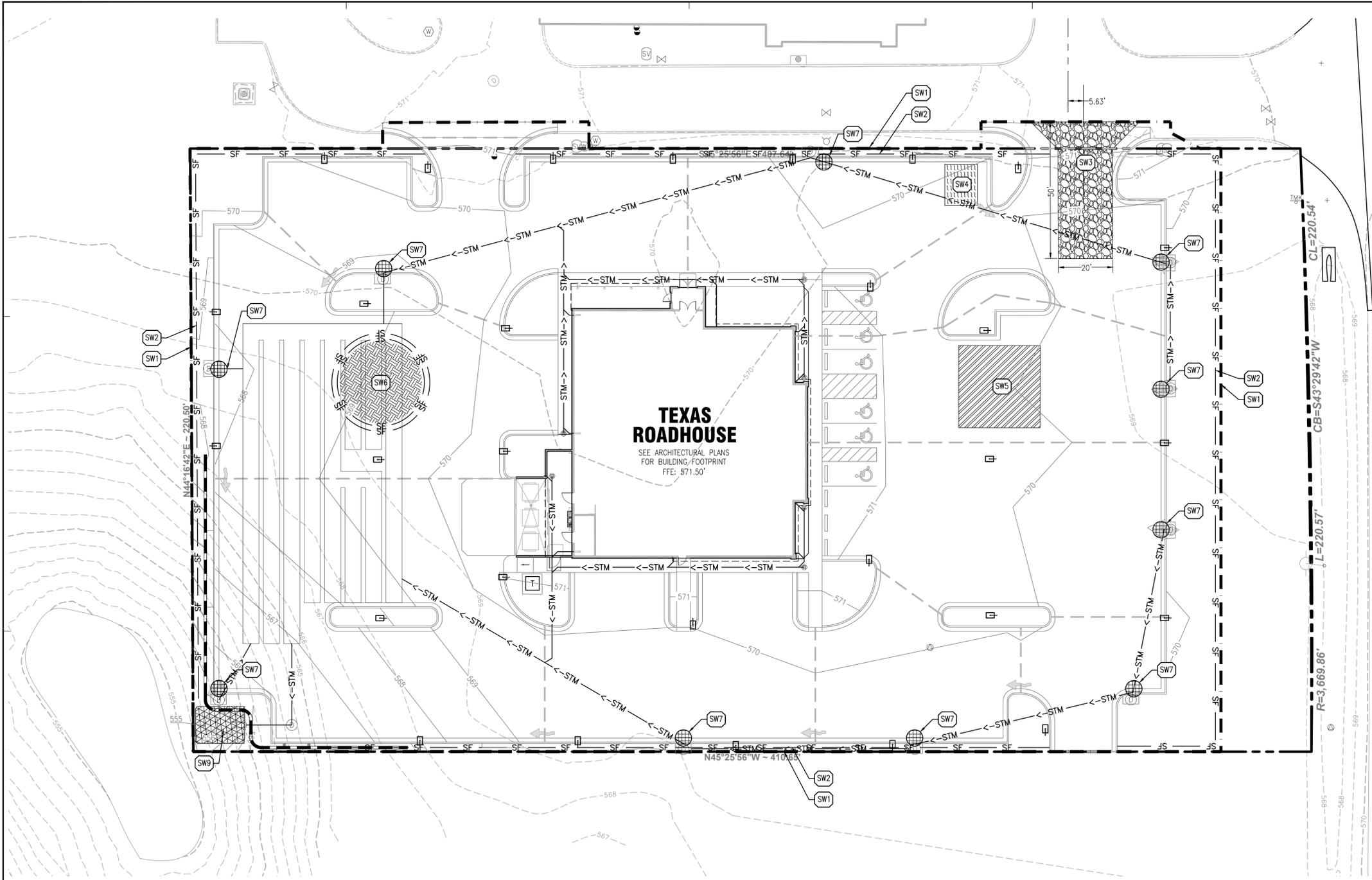
- SW1 PROPOSED PROJECT LAND DISTURBANCE LIMITS
- SW2 PROPOSED SILT FENCE
- SW3 PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- SW4 PROPOSED CONCRETE WASHOUT WITH MINIMUM 30-MIL POLYETHYLENE LINING AND LOCATION SIGNAGE
- SW5 PROPOSED CONTRACTOR STAGING AREA INCLUDING MATERIALS STORAGE, COVERED TRASH DUMPSTER, AND PORTABLE TOILET FACILITIES
- SW6 PROPOSED TEMPORARY TOPSOIL STOCKPILE WITH DOUBLE SILT FENCE PROTECTION
- SW7 PROPOSED INLET PROTECTION
- SW8 PROPOSED EROSION CONTROL BLANKET (NORTH AMERICAN GREEN SC150)
- SW9 PROPOSED GROUTED RIP-RAP STILLING BASIN (SEE C7.2 FOR DETAILS)

**SWPPP/SESC CONSTRUCTION SCHEDULE:**

1. OBTAIN ALL APPLICABLE SITE PERMITS AND THOROUGHLY REVIEW PROJECT'S SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC) OR STORMWATER POLLUTION PREVENTION PLANS (SWPPP) PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND UPDATING THE SWPPP/SESC THROUGHOUT THE DURATION OF CONSTRUCTION AS NECESSARY UNTIL FINAL SITE STABILIZATION IS ACHIEVED.
2. INSTALL PERIMETER SEDIMENT CONTROL MEASURES (I.E. SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE).
3. INSTALL INLET PROTECTION DEVICES FOR EXISTING STORM SEWER INLETS AND DRAINAGE STRUCTURES.
4. PERFORM SITE INSPECTIONS ON A WEEKLY BASIS AND WITHIN TWENTY-FOUR (24) HOURS OF THE END OF A RAINFALL EVENT THAT IS 0.5 INCH OR GREATER (OR EQUIVALENT SNOWFALL). AT A MINIMUM, THE INSPECTIONS SHALL INCLUDE THE DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, ALL STRUCTURAL CONTROL MEASURES, LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND ANY ADDITIONAL BEST MANAGEMENT PRACTICES IDENTIFIED IN THE SWPPP/SESC.
  - 4.1. ALL SITE EROSION AND SEDIMENT CONTROL MEASURES AND BEST MANAGEMENT PRACTICES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SHALL BE CONTINUOUSLY MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. CONTRACTOR SHALL MAKE AND COMPLETE THE REQUIRED REPAIRS WITHIN FORTY-EIGHT (48) HOURS OF THE INSPECTION.
  - 4.2. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL STRUCTURAL CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE SITE INSPECTIONS.
5. INSTALL NEW STORM SEWERS AND OTHER SITE UTILITIES AS INDICATED ON THE PLANS. INSTALLATION OF STORM SEWERS INCLUDING ALL DETENTION SYSTEMS MUST BE DONE PRIOR TO ANY PAVING INCLUDING SLAB.
6. PROVIDE TEMPORARY SEEDING AND/OR MULCHING FOR ALL DISTURBED SITE AREAS THAT WILL NOT BE WORKED ON FOR MORE THAN FOURTEEN (14) DAYS.
7. INSTALL TEMPORARY CONCRETE WASHOUT FACILITY PRIOR TO COMMENCEMENT OF ANY CONCRETE WORK ON SITE.
8. INSTALL CURBS AND BEGIN SITE PAVING OPERATIONS (I.E. DRIVEWAYS, SIDEWALKS, ETC.)
9. PERFORM STREET CLEANING OPERATIONS AND OTHER BEST MANAGEMENT PRACTICES AS NEEDED FOR AREAS ADJACENT TO THE PROJECT SITE.
10. INSTALL BUILDING FOUNDATION AND COMPLETE BUILDING CONSTRUCTION AND REMAINING SITE IMPROVEMENTS.
11. REMOVE ALL TEMPORARY SITE EROSION AND SEDIMENT CONTROL MEASURES WITHIN THIRTY (30) DAYS OF FINAL SITE STABILIZATION ONCE PERMANENT STABILIZATION OF THE ENTIRE SITE HAS BEEN COMPLETED AND ALL GROUND COVER IS ESTABLISHED.

**DISTURBED SITE AREA TABLE:**

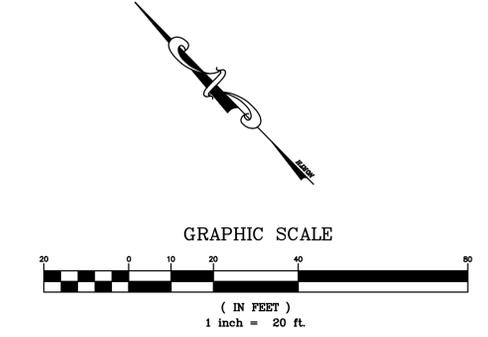
TOTAL DISTURBED AREA:	84,797 SQ. FT. / 1.95 ACRES
IMPERVIOUS AREA:	70,272 SQ. FT. / 1.61 ACRES
PERVIOUS AREA:	14,525 SQ. FT. / 0.33 ACRES

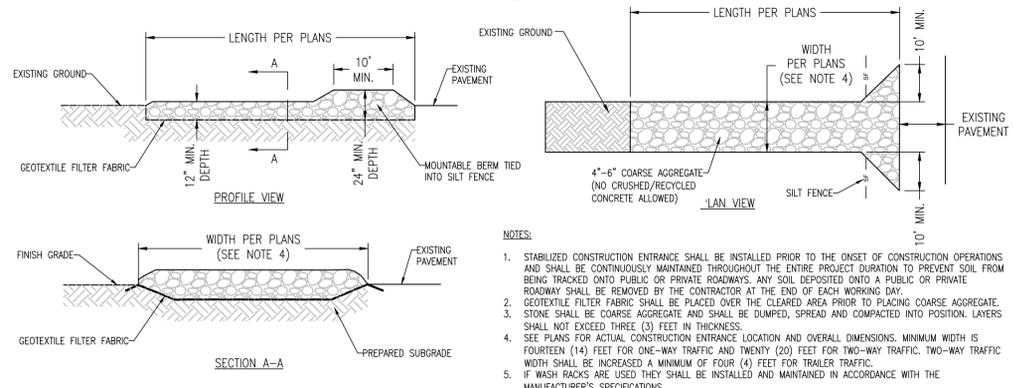


**SWPPP / SESC NOTES:**

1. COPIES OF THE APPROVED SOIL EROSION AND SEDIMENT CONTROL (SESC) PLANS OR STORMWATER POLLUTION PREVENTION PLANS (SWPPP) SHALL BE MAINTAINED ON THE SITE AT ALL TIMES ALONG WITH ANY NECESSARY PERMITS AND INSPECTION FORMS.
2. ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND DEVICES SHALL BE INSTALLED AND FUNCTIONAL BEFORE THE SITE IS OTHERWISE DISTURBED. THEY SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SITE STABILIZATION HAS BEEN ACHIEVED.
3. CONTRACTOR SHALL IMPLEMENT SITE SPECIFIC BEST MANAGEMENT PRACTICES (BMPs) AS SHOWN AND REQUIRED BY THE SWPPP/SESC. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED BY THE CONTRACTOR AS DICTATED BY SITE CONDITIONS OR THE PROJECT GOVERNING AUTHORITIES AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
4. ALL BEST MANAGEMENT PRACTICES AND CONTROLS SHALL CONFORM TO THE APPLICABLE FEDERAL, STATE, OR LOCAL REQUIREMENTS, STANDARDS, AND SPECIFICATIONS OR MANUAL OF PRACTICE.
5. IF AFTER REPEATED FAILURE ON THE PART OF THE CONTRACTOR TO PROPERLY CONTROL SOIL EROSION, SEDIMENT AND/OR POLLUTION FROM THE PROJECT SITE, THE GOVERNING AUTHORITIES RESERVE THE RIGHT TO EFFECT NECESSARY CORRECTIVE MEASURES AND CHARGE ANY COSTS TO THE CONTRACTOR.
6. INLET PROTECTION SHALL BE INSTALLED AROUND EACH INLET OR CATCH BASIN WITHIN THE VICINITY OF THE DISTURBED AREA LIMITS AS SHOWN ON THE PLANS. THESE SHALL BE MAINTAINED UNTIL THE TRIBUTARY DRAINAGE AREAS HAVE ADEQUATE GRASS COVER AND/OR APPROPRIATE GROUND STABILIZATION.
7. ALL STREETS ADJACENT TO THE PROJECT SITE SHALL BE KEPT FREE OF DIRT, MUD AND DEBRIS. CONTRACTOR SHALL CLEAN ADJACENT PAVEMENTS AT THE END OF EACH WORKING DAY WHEN NECESSARY.
8. CONTRACTORS SHALL MINIMIZE BARE EARTH SURFACES DURING CONSTRUCTION TO THE EXTENT PRACTICABLE.
9. ALL DISTURBED AREAS SHALL BE SEEDDED OR SODDED AS SOON AS IS PRACTICABLE.
10. IF DURING CONSTRUCTION OPERATIONS ANY LOOSE MATERIALS ARE DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, OR DITCHES SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THIS LOOSE MATERIAL SHALL BE REMOVED.
11. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY EXISTING STORM DRAINAGE SYSTEMS BY THE USE OF INLET PROTECTION OR OTHER APPROVED FUNCTIONAL METHODS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING SEDIMENT RESULTING FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.
12. CONSTRUCTION ACCESS POINTS TO THE SITE SHALL BE PROTECTED IN SUCH A WAY AS TO PREVENT TRACKING OF MUD OR SOIL ONTO PUBLIC THOROUGHFARES. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
13. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
14. DUST SHALL BE ADEQUATELY CONTROLLED ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
15. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED TRASH CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
16. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED OR OTHERWISE DISCHARGED FROM THE SITE INTO SEDIMENT BASINS, SILT TRAPS, Dewatering BAGS OR POLYMER MIXING SWALES. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER SYSTEMS IS PROHIBITED.
17. ALL DISTURBED AREAS SHALL BE SEEDDED OR SODDED WITHIN THREE (3) DAYS OF FINAL DISTURBANCE.
18. ALL SOIL STOCKPILES SHALL BE STABILIZED WITHIN THREE (3) DAYS OF FORMING THE STOCKPILE.
19. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN (7) DAYS AFTER THE

- CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED AS FOLLOWS:
- 19.1. WHEN THE INITIATION OF STABILIZATION MEASURES BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
  - 19.2. WHEN CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED (I.E. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 14 DAYS), THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASES.
  20. PRE-QUALIFIED PERSONNEL (PROVIDED BY THE CONTRACTOR) SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY-FOUR (24) HOURS OF THE END OF A RAINFALL EVENT THAT IS 0.5 INCH OR GREATER (OR EQUIVALENT SNOWFALL). REQUIRED REPAIRS SHOULD BE COMPLETED WITHIN FORTY-EIGHT (48) HOURS OF THE INSPECTION.
  21. EROSION CONTROL BLANKETS SHALL BE USED IN AREAS OF 4:1 SLOPE OR STEEPER.
  22. ALL TEMPORARY EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE PROPERLY STABILIZED OR DISPOSED OF OFF SITE BY THE CONTRACTOR.
  23. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN THOSE INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREA), A SUPPLEMENTARY STORM WATER POLLUTION PREVENTION PLAN SHALL BE SUBMITTED TO THE OWNER AND ENGINEER FOR REVIEW.
  24. ALL CONSTRUCTION VEHICLE TRAFFIC MUST REMAIN WITHIN THE LIMITS OF CONSTRUCTION.

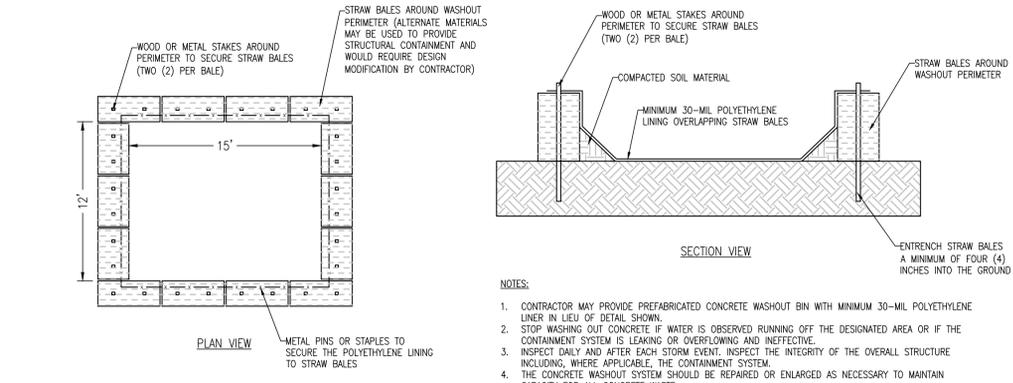




- NOTES:**
1. STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO THE ONSET OF CONSTRUCTION OPERATIONS AND SHALL BE CONTINUOUSLY MAINTAINED THROUGHOUT THE ENTIRE PROJECT DURATION TO PREVENT SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL DEPOSITED ONTO A PUBLIC OR PRIVATE ROADWAY SHALL BE REMOVED BY THE CONTRACTOR AT THE END OF EACH WORKING DAY.
  2. GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE CLEARED AREA PRIOR TO PLACING COARSE AGGREGATE. STONE SHALL BE COARSE AGGREGATE AND SHALL BE DUMPED, SPREAD AND COMPACTED INTO POSITION. LAYERS SHALL NOT EXCEED THREE (3) FEET IN THICKNESS.
  3. SEE PLANS FOR ACTUAL CONSTRUCTION ENTRANCE LOCATION AND OVERALL DIMENSIONS. MINIMUM WIDTH IS FOURTEEN (14) FEET FOR ONE-WAY TRAFFIC AND TWENTY (20) FEET FOR TWO-WAY TRAFFIC. WIDTH SHALL BE INCREASED A MINIMUM OF FOUR (4) FEET FOR TRAILER TRAFFIC.
  4. IF WASH RACKS ARE USED THEY SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

**STABILIZED CONSTRUCTION ENTRANCE DETAIL**

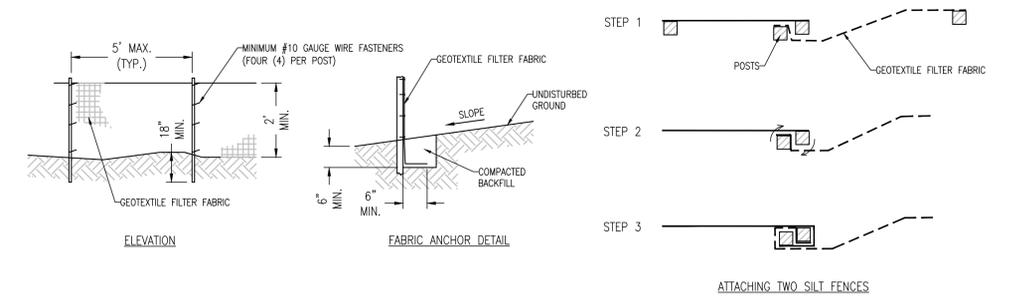
NOT TO SCALE



- NOTES:**
1. CONTRACTOR MAY PROVIDE PREFABRICATED CONCRETE WASHOUT BIN WITH MINIMUM 30-MIL POLYETHYLENE LINER IN LIEU OF DETAIL SHOWN.
  2. STOP WASHING OUT CONCRETE IF WATER IS OBSERVED RUNNING OFF THE DESIGNATED AREA OR IF THE CONTAINMENT SYSTEM IS LEAKING OR OVERFLOWING AND INEFFECTIVE.
  3. INSPECT DAILY AND AFTER EACH STORM EVENT. INSPECT THE INTEGRITY OF THE OVERALL STRUCTURE INCLUDING, WHERE APPLICABLE, THE CONTAINMENT SYSTEM.
  4. THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR ALL CONCRETE WASTE.

**CONCRETE WASHOUT DETAIL**

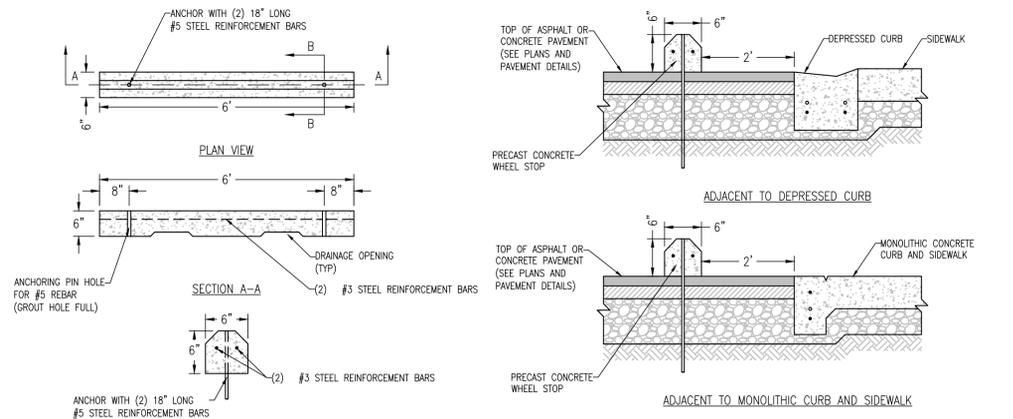
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- NOTES:**
1. TEMPORARY SILT FENCE SHALL BE INSTALLED AROUND PROJECT PERIMETER PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
  2. GEOTEXTILE FILTER FABRIC SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
  3. FENCE POSTS SHALL BE STANDARD STEEL WITH A MINIMUM CROSS SECTIONAL AREA OF THREE (3) SQUARE INCHES (NO WOODEN STAKES ALLOWED).
- NOTES:**
1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
  2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
  3. DRIVE BOTH POSTS A MINIMUM OF EIGHTEEN (18) INCHES INTO THE GROUND AND BURY THE FLAP.

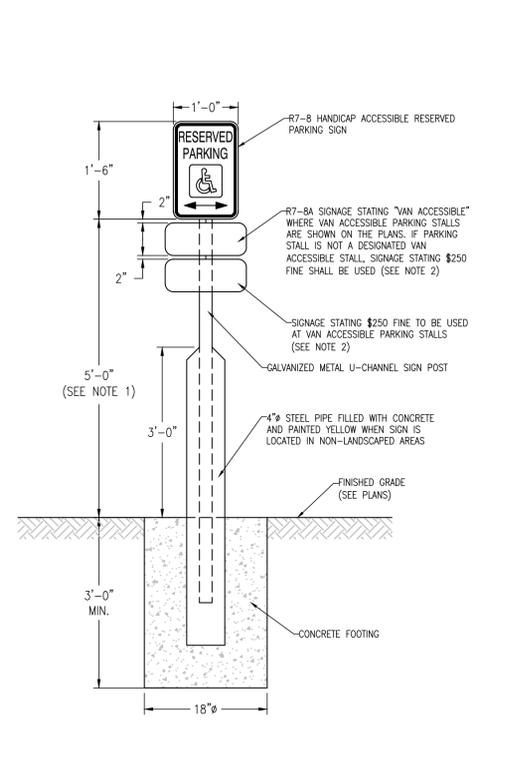
**SILT FENCE DETAIL**

NOT TO SCALE



**CONCRETE WHEEL STOP DETAIL**

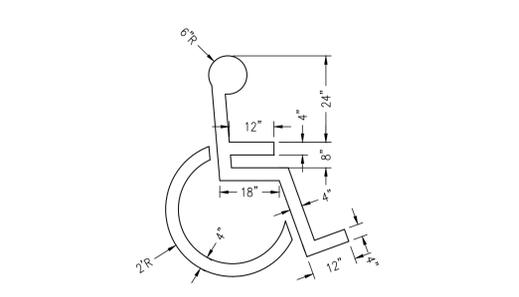
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- NOTES:**
1. ACCESSIBLE PARKING SIGNS SHALL BE CENTERED AT THE FRONT OF EACH PARKING STALL AND INSTALLED WITH A MINIMUM HEIGHT OF FIVE (5) FEET ABOVE FINISHED PAVEMENT OR GRADE ELEVATION UNLESS OTHERWISE DIRECTED BY LOCAL BUILDING CODES.
  2. CONTRACTOR SHALL VERIFY FINE AMOUNT WITH LOCAL BUILDING CODES PRIOR TO INSTALLATION.

**ACCESSIBLE PARKING SIGN DETAIL**

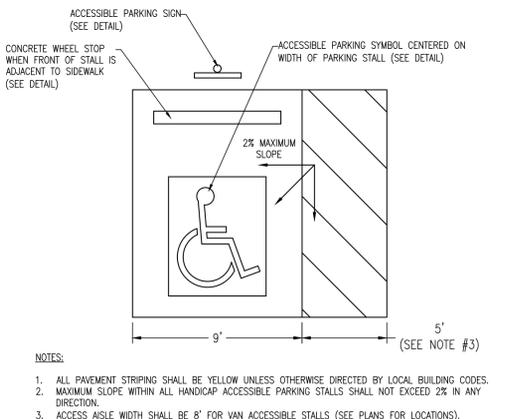
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- NOTE:**
1. SYMBOL SHALL BE CENTERED ON WIDTH OF PARKING STALL AND PAINTED WHITE ON BLUE BACKGROUND UNLESS OTHERWISE DIRECTED BY LOCAL BUILDING CODES.

**ACCESSIBLE PARKING SYMBOL DETAIL**

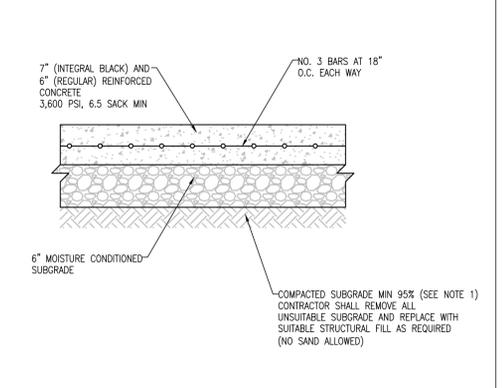
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**ACCESSIBLE PARKING STALL DETAIL**

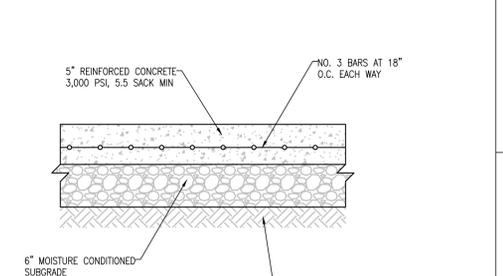
NOT TO SCALE

- NOTES:**
1. ALL PAVEMENT STRIPING SHALL BE YELLOW UNLESS OTHERWISE DIRECTED BY LOCAL BUILDING CODES.
  2. MAXIMUM SLOPE WITHIN ALL HANDICAP ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 2% IN ANY DIRECTION.
  3. ACCESS AISLE WIDTH SHALL BE 8' FOR VAN ACCESSIBLE STALLS (SEE PLANS FOR LOCATIONS).



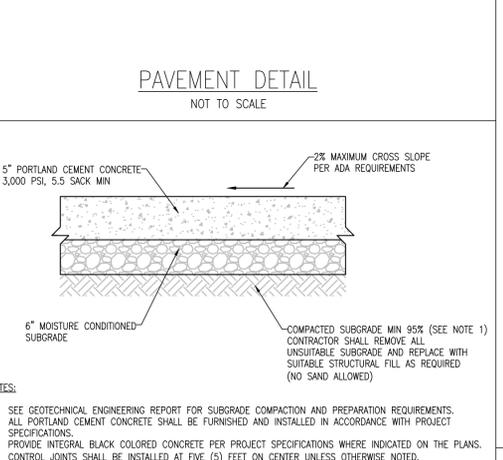
**HEAVY DUTY PAVEMENT DETAIL**

NOT TO SCALE



**PAVEMENT DETAIL**

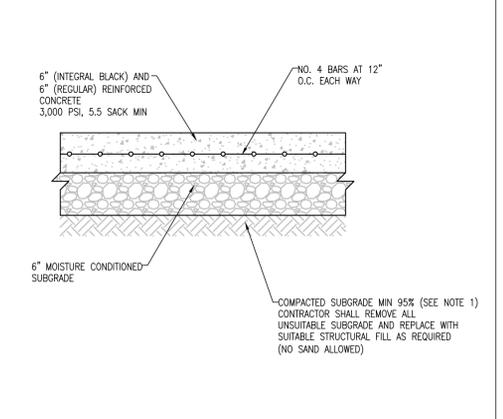
NOT TO SCALE



- NOTES:**
1. SEE GEOTECHNICAL ENGINEERING REPORT FOR SUBGRADE COMPACTION AND PREPARATION REQUIREMENTS.
  2. ALL PORTLAND CEMENT CONCRETE SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
  3. PROVIDE INTEGRAL BLACK COLORED CONCRETE PER PROJECT SPECIFICATIONS WHERE INDICATED ON THE PLANS.
  4. CONTROL JOINTS SHALL BE INSTALLED AT FIVE (5) FEET ON CENTER UNLESS OTHERWISE NOTED.
  5. EXPANSION JOINTS SHALL BE INSTALLED AT FIFTY (50) FEET ON CENTER. SIDEWALK RADIUS POINTS, ALL LOCATIONS WHERE NEW CONCRETE SIDEWALKS ADJOIN EXISTING CONCRETE AND FIVE (5) FEET ON EACH SIDE OF ALL UTILITY CASTINGS ADJACENT TO NEW CONCRETE.
  6. INSTALL TWO (2) CONTINUOUS NO. 4 STEEL REBAR PERPENDICULAR TO AND CENTERED OVER ALL UTILITY TRENCH CROSSINGS SO BARS EXTEND A MINIMUM OF FIVE (5) FEET BEYOND TRENCH.

**CONCRETE SIDEWALK DETAIL**

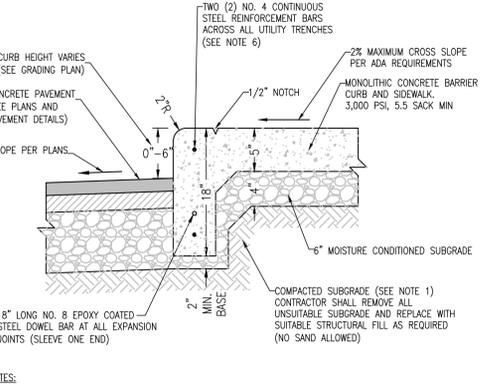
NOT TO SCALE



**CONCRETE DETAIL**

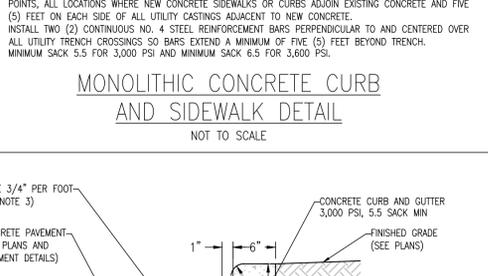
NOT TO SCALE

- NOTES:**
1. SEE GEOTECHNICAL ENGINEERING REPORT FOR SUBGRADE COMPACTION AND PREPARATION REQUIREMENTS.
  2. ALL PORTLAND CEMENT CONCRETE SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
  3. CURB NOTED ON THE PLANS AS "REVERSE PITCH" SHALL HAVE THE GUTTER SLOPE REVERSED TO FLOW AWAY FROM THE FACE OF CURB.
  4. BASE COURSE SHALL BE ODOT #304 CRUSHED STONE OR APPROVED EQUAL.
  5. CONTROL JOINTS SHALL BE INSTALLED AT TEN (10) FEET ON CENTER UNLESS OTHERWISE NOTED.
  6. EXPANSION JOINTS SHALL BE INSTALLED AT FIFTY (50) FEET ON CENTER. CURB RADIUS POINTS, ALL LOCATIONS WHERE NEW CONCRETE CURBS ADJOIN EXISTING CONCRETE AND FIVE (5) FEET ON EACH SIDE OF ALL UTILITY CASTINGS ADJACENT TO NEW CONCRETE.
  7. INSTALL TWO (2) CONTINUOUS NO. 4 STEEL REBAR PERPENDICULAR TO AND CENTERED OVER ALL UTILITY TRENCH CROSSINGS SO BARS EXTEND A MINIMUM OF FIVE (5) FEET BEYOND TRENCH.
  8. MINIMUM SACK 5.5 FOR 3,000 PSI AND MINIMUM SACK 6.5 FOR 3,600 PSI.



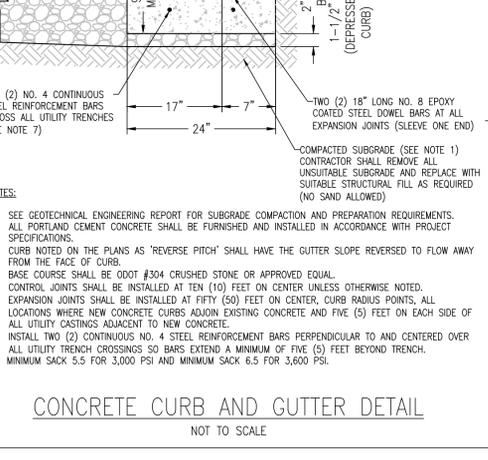
**MONOLITHIC CONCRETE CURB AND SIDEWALK DETAIL**

NOT TO SCALE



**CONCRETE CURB AND GUTTER DETAIL**

NOT TO SCALE



- NOTES:**
1. SEE GEOTECHNICAL ENGINEERING REPORT FOR SUBGRADE COMPACTION AND PREPARATION REQUIREMENTS.
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  8. MINIMUM SACK 5.5 FOR 3,000 PSI AND MINIMUM SACK 6.5 FOR 3,600 PSI.

**CONCRETE CURB AND GUTTER DETAIL**

NOT TO SCALE

**PROJECT TEAM**

PROJECT MANAGER	JEFF RATH
QUALITY CONTROL	LARRY DIEHL
DRAWN BY	MITCH HEFFERNAN

**ISSUE/REVISION RECORD**

DATE	DESCRIPTION
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01/27/17	SITE PLAN SUBMITTAL
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11/20/17	CONSTRUCTION SET
12/13/17	GRADING REVISIONS
01/05/18	OWNER REVISIONS
08/07/18	AS-BUILT

**STATE OF TEXAS**  
**JOHN H. NOURZAD**  
 LICENSE NO. 85192  
 REGISTERED PROFESSIONAL ENGINEER

**PROJECT IN CHARGE**  
**JOHN NOURZAD**  
 PROFESSIONAL ENGINEER  
 LICENSE NO. 85192

**PROJECT MANAGER**  
 JEFF RATH

**QUALITY CONTROL**  
 LARRY DIEHL

**DRAWN BY**  
 MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

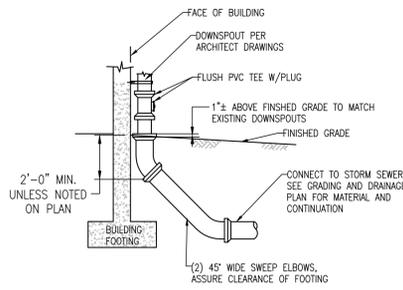
**ROCKWALL TEXAS**  
 912 I-30 FRONTAGE ROAD



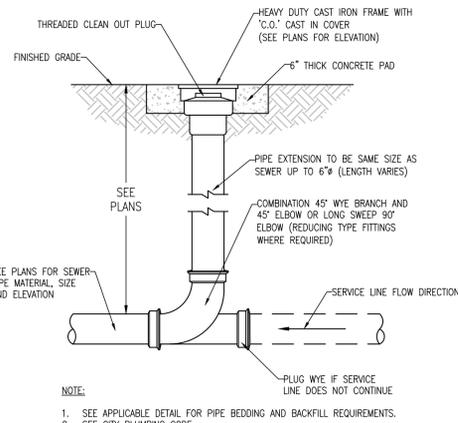
**PROJECT NUMBER**  
 201512910

**SHEET TITLE**  
**CONSTRUCTION DETAILS**

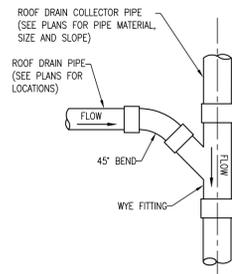
**SHEET NUMBER**  
**C7.0**



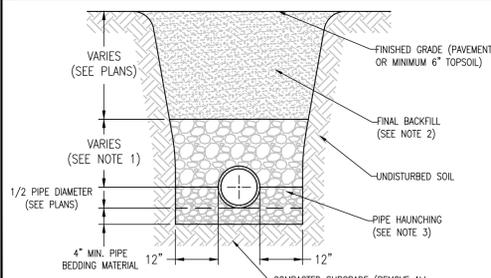
PRIVATE DOWNSPOUT LEADER DETAIL  
NOT TO SCALE



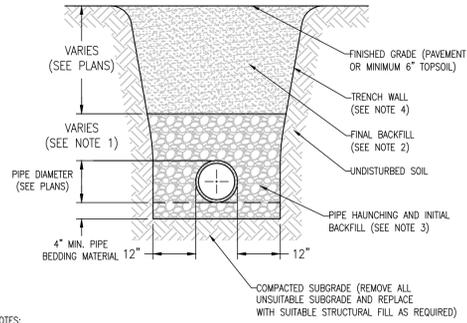
SEWER CLEAN OUT DETAIL  
NOT TO SCALE



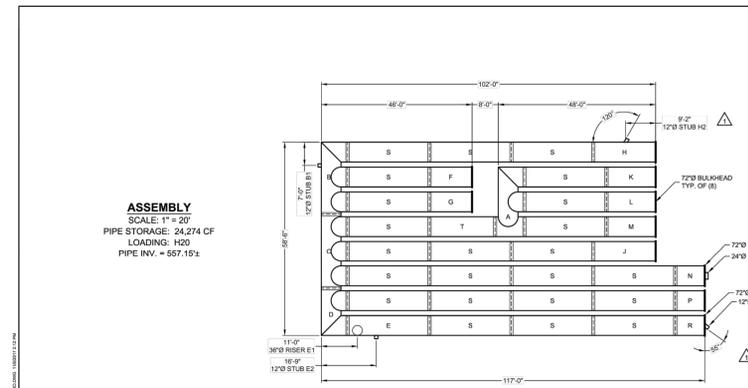
PRIVATE ROOF DRAIN WYE CONNECTION DETAIL  
NOT TO SCALE



PRIVATE RIGID PIPE TRENCH DETAIL  
NOT TO SCALE

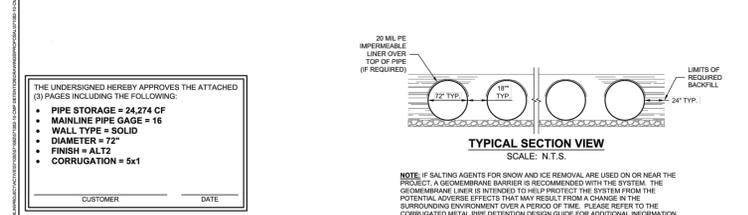


PRIVATE FLEXIBLE PIPE TRENCH DETAIL  
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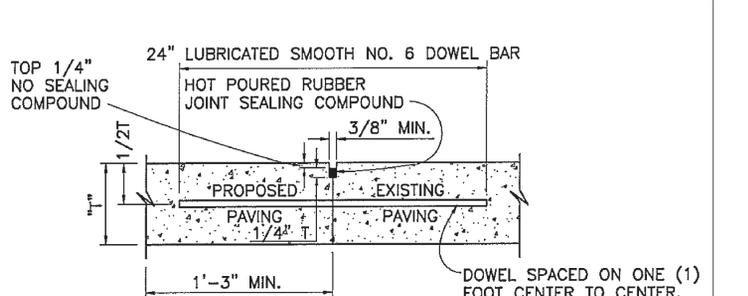


STUB INFORMATION		
PIECE	STUB INVERT	SYSTEM INVERT
12\"/>		

RISER INFORMATION		
PIECE	RIM ELEV.	SYSTEM INVERT
3\"/>		

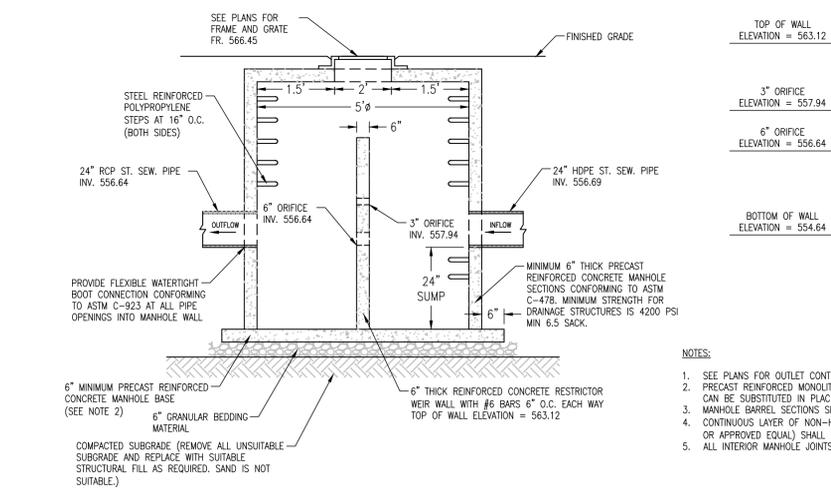


NO.	DESCRIPTION	QTY	UNIT	DATE
1	ADDED STUB NO. REVISED STUB NO. ANGLE			

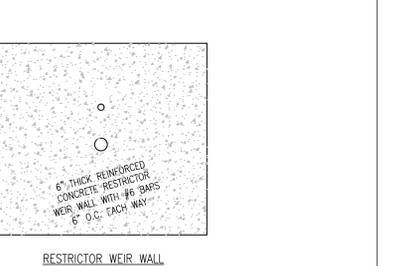


- NOTES: T=PAVEMENT THICKNESS
- LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HINGED (KEYWAY) JOINT AT CONTRACTORS OPTION.
  - DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG.
- DRILLING BY HAND IS NOT ACCEPTABLE, PUSHING DOWEL BARS INTO GREEN CONCRETE NOT ACCEPTABLE

LONGITUDINAL BUTT JOINT  
NOT TO SCALE



5' RESTRICTOR PRE-CAST MANHOLE DETAIL  
NOT TO SCALE



- NOTES:
- SEE PLANS FOR OUTLET CONTROL STRUCTURE LOCATION AND ORIENTATION.
  - PRECAST REINFORCED MONOLITHIC CONCRETE MANHOLE BOTTOM WITH INTEGRAL SIDEWALLS CAN BE SUBSTITUTED IN PLACE OF THE CONCRETE BOTTOM SLAB DESIGN SHOWN.
  - MANHOLE BARREL SECTIONS SHALL BE TONGUE AND GROOVE TYPE.
  - CONTINUOUS LAYER OF NON-HARDENING, PREFORMED, BITUMINOUS, MASTIC MATERIAL (RANKEK OR APPROVED EQUAL) SHALL BE APPLIED TO EACH MANHOLE JOINT TO PREVENT INFLOW.
  - ALL INTERIOR MANHOLE JOINTS SHALL BE MORTARED WITH HYDRAULIC CEMENT.

Project: - JC 17-34 Texas Roadhouse (Rev. 1) Rockwall, TX

Client: JC

Name: JC 17-34 Texas Roadhouse

Site: Rockwall, TX

Revision: 1 Created: 7/20/2017 Modified: 7/20/2017

Standard: National Concrete Masonry Association 3rd Edition

Designer: AWE

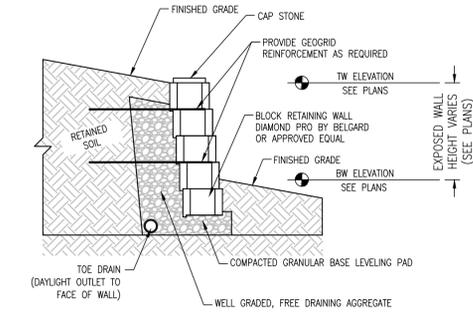
Quantity Table:

Wall	Facing	Wall/Cap Length [ft]	Facing Units	TOW Steps	Facing Area [sq ft]	Total Wall Area [sq ft]
1	Diamond Pro®	184	1218	4	1218	1279
		184	1218	4	1218	1279

Wall	Leveling Pad [yd³]	Reinforced Fill [yd³]	Drainage Fill [yd³]	Core Fill [yd³]
1	7	369	45 + 11	21
Totals:	7	369	45 + 11	21

Wall	Reinforcements	Filter Fabric [yd²]
1	3XT	326
Totals:	930	326

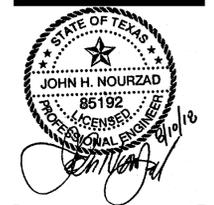
BLOCK RETAINING WALL ESTIMATES



- NOTES:
- DETAIL PROVIDED FOR INFORMATION PURPOSES ONLY. REFER TO SIGNED AND SEALED DRAWINGS FOR CONSTRUCTION DETAILS.
  - REFER TO PLANS FOR RETAINING WALL LOCATIONS AND ELEVATIONS.
  - CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO ENGINEER FROM RETAINING WALL MANUFACTURER.
  - CONTRACTOR SHALL INSTALL RETAINING WALL IN ACCORDANCE WITH APPROVED MANUFACTURER'S GUIDELINES, SPECIFICATIONS, AND SHOP DRAWINGS.
  - CONTRACTOR SHALL PROVIDE RETAINING WALL MATERIAL SAMPLES TO THE OWNER, ARCHITECT AND/OR ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
  - SEE PRELIMINARY DESIGN BY ANCHOR WALL SYSTEMS FOR QUANTITIES, PROJECT JC 17-34
- CONTRACTOR SHALL SUBMIT SIGNED AND SEALED SHOP DRAWINGS TO CITY FOR REVIEW AND APPROVAL PRIOR TO WALL CONSTRUCTION. DESIGN BY ANCHOR WALL SYSTEMS OR APPROVED EQUAL.

BLOCK RETAINING WALL DETAIL  
NOT TO SCALE

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PROFESSIONAL IN CHARGE  
JOHN NOURZAD  
PROFESSIONAL ENGINEER  
LICENSE NO. 85192

PROJECT MANAGER  
JEFF RATH  
QUALITY CONTROL  
LARRY DIEHL  
DRAWN BY  
MITCH HEFFERNAN

PROJECT NAME  
TEXAS ROADHOUSE

ROCKWALL TEXAS  
912 I-30 FRONTAGE ROAD



PROJECT NUMBER  
201512910

SHEET TITLE  
CONSTRUCTION DETAILS

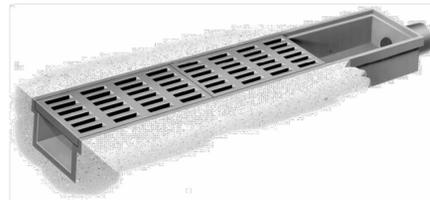
SHEET NUMBER  
C7.1

**R-4995 - R-4996**  
**TYPE M TRENCH FRAME WITH SOLID OR GRATED COVER**

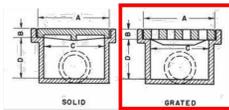
Cast Iron Trench Assemblies—Light or Heavy Duty—For Use in Sidewalks, Driveways, Garages, Loading Docks, etc.

**Read Carefully Before Ordering**

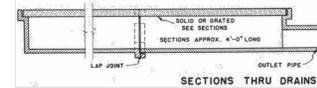
- Specify:**
1. Complete catalog number.
  2. Light or heavy duty.
  3. Overall length of cover required.
  4. Lid solid, flat grated, or diagonally barred cover grate.
  5. Location of outlet, side, bottom or end (give dimensional location and pipe size).
  6. Whether one end or both ends are to be open or closed.



Illustrating Type M frame with grate cover. Standard with 4-inch outside caulk outlet. Can be equipped for inside caulk if specified.



Trench covers are used over areas requiring long drainage assemblies. Can be supplied in a variety of sizes and lengths to meet special needs. For trenches of irregular pattern, product engineering can provide layout drawings.

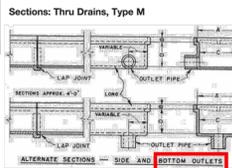


Standard 4-inch outlet at end of drain. Special size outlets are available. Provided with side and bottom outlets optional and furnished only when specified.

Dimensions in inches

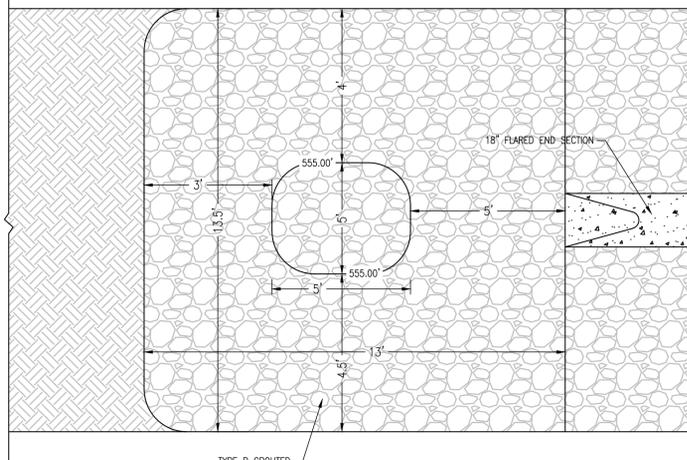
Catalog No.	Description	A	B	C	D	Length
<b>Standard Sizes—Light Duty</b>						
R-4995-A1**	With grated cover	1 1/2	3/4	10	6 1/2	As ordered
R-4995-A2*	With grated cover	7	3/4	5	4 1/2	As ordered
R-4995-B1	With solid cover	1 1/2	3/4	10	6 1/2	As ordered
R-4995-B2	With solid cover	7	3/4	5	4 1/2	As ordered
<b>Standard Sizes—Heavy Duty</b>						
R-4996-A1**	With grated cover	1 1/2	1 1/4	10	6	As ordered
R-4996-A2*	With grated cover	7	1 1/4	5	4 1/2	As ordered
R-4996-B1	With solid cover	1 1/2	1 1/4	10	6	As ordered
R-4996-B2	With solid cover	7	1 1/4	5	4 1/2	As ordered

Above Standard Frames made in 4 ft. sections, covers in 2 ft. lengths.  
 \*Available with Type B grate only.  
 \*\*Also available with Type P grate.

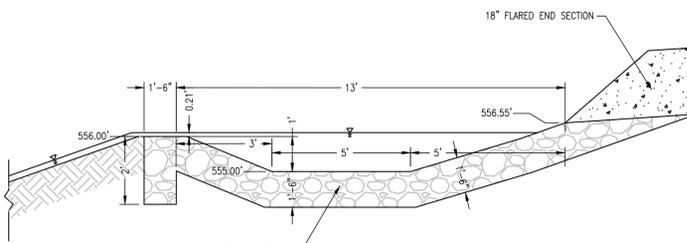


CLICK HERE to return to the Table of Contents

**NEENAH TRENCH DRAIN DETAIL**  
 NOT TO SCALE



TYPE R GROUTED RIP-RAP  
 PLAN



PROFILE

**RIP-RAP STILLING BASIN DETAIL**  
 NOT TO SCALE

**Weir Report**

Hydraulflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

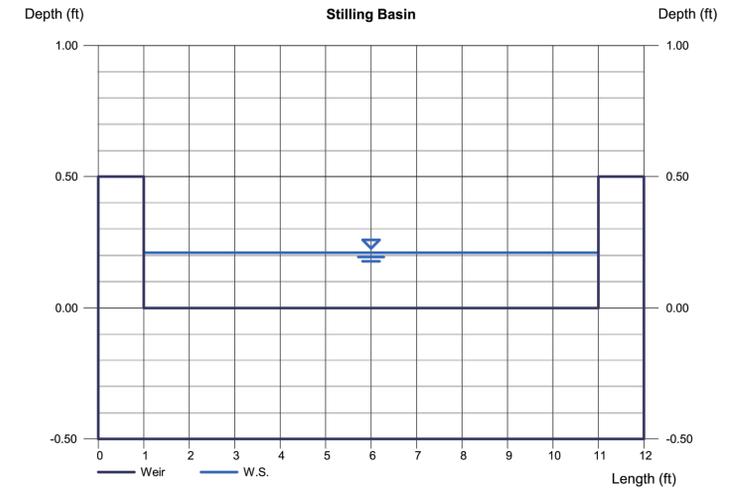
Thursday, Sep 14 2017

**Stilling Basin**

**Rectangular Weir**  
 Crest = Broad  
 Bottom Length (ft) = 10.00  
 Total Depth (ft) = 0.50

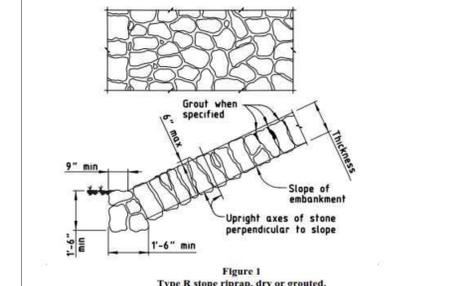
**Calculations**  
 Weir Coeff. Cw = 2.60  
 Compute by: Known Q  
 Known Q (cfs) = 2.51

**Highlighted**  
 Depth (ft) = 0.21  
 Q (cfs) = 2.510  
 Area (sqft) = 2.10  
 Velocity (ft/s) = 1.19  
 Top Width (ft) = 10.00



**RIP-RAP STILLING BASIN WEIR REPORT**  
 NOT TO SCALE

1. **Type R.** Use stones between 50 and 250 lb. with a minimum of 50% of the stones heavier than 100 lb.
1. **Type R.** Construct riprap as shown in Figure 1 and as shown on the plans. Place stones in a single layer with close joints so that most of their weight is carried by the earth and not by the adjacent stones. Place the upright axis of the stones at an angle of approximately 90° to the embankment slope. Place each course from the bottom of the embankment upward with the larger stones in the lower courses. Fill open joints between stones with spalls. Place stones to create a uniform finished top surface. Do not exceed a 6-in. variation between the tops of adjacent stones. Replace, embed deeper, or chip away stones that project more than the allowable amount above the finished surface. When the plans require Type R stone riprap to be grouted, prevent earth, sand, or foreign material from filling the spaces between the stones. After the stones are in place, wet the stones thoroughly, fill the spaces between the stones with grout, and pack. Sweep the surface of the riprap with a stiff broom after grouting.



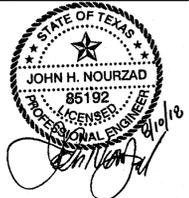
**GROUTED RIP-RAP DETAIL**  
 NOT TO SCALE

**PROJECT TEAM**

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**ISSUE/REVISION RECORD**

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**PROFESSIONAL IN CHARGE**  
**JOHN NOURZAD**  
 PROFESSIONAL ENGINEER  
 LICENSE NO. 85192

**PROJECT MANAGER**  
 JEFF RATH

**QUALITY CONTROL**  
 LARRY DIEHL

**DRAWN BY**  
 MITCH HEFFERNAN

**PROJECT NAME**  
**TEXAS ROADHOUSE**

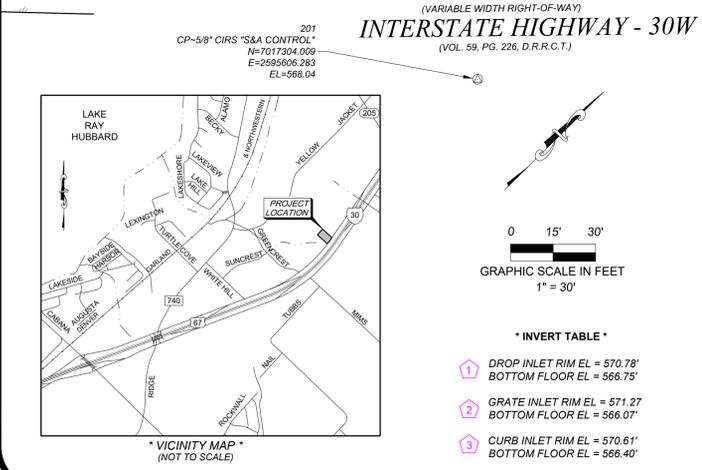
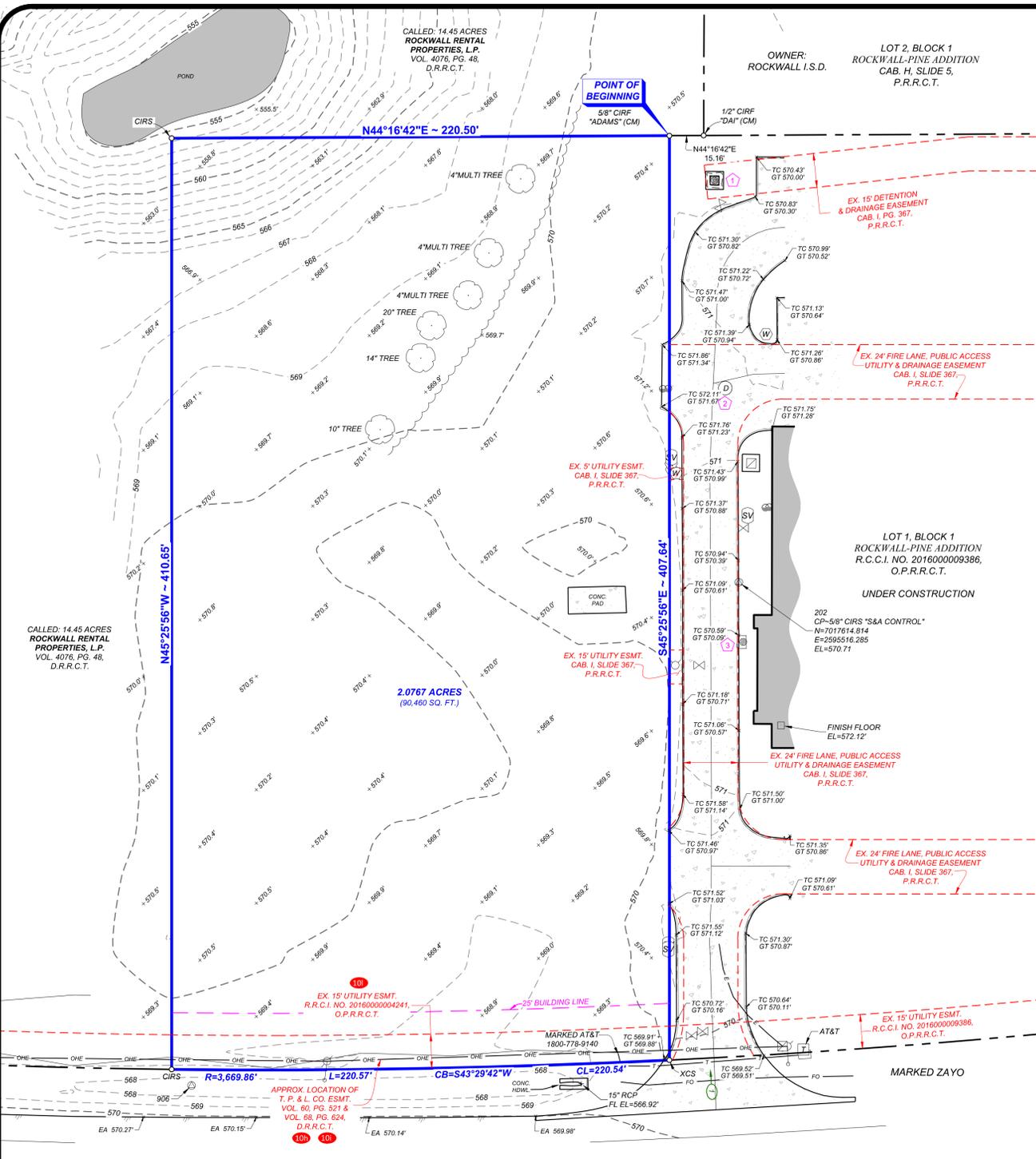
**ROCKWALL TEXAS**  
 912 I-30 FRONTAGE ROAD



**PROJECT NUMBER**  
 201512910

**SHEET TITLE**  
**CONSTRUCTION DETAILS**

**SHEET NUMBER**  
**C7.2**



**\* LEGEND \***

CIRF	IRON ROD WITH CAP FOUND	(W)	WATER METER
IRF	IRON ROD FOUND	(X)	WATER VALVE
CIRS	5/8" IRON ROD WITH CAP STAMPED "SPOONER & ASSOCIATES" SET	EA 555.55	SPOT ELEVATION
XCS	"X" CUT IN CONC. SET	GT 555.55	EDGE OF ASPHALT ELEVATION
D.R.R.C.T.	DEED RECORDS, ROCKWALL COUNTY, TEXAS	TC 555.55	GUTTER ELEVATION
O.P.R.R.C.T.	OFFICIAL PUBLIC RECORDS, ROCKWALL COUNTY, TEXAS	TC 555.55	TOP OF CURB ELEVATION
ESMT.	EASEMENT	---	ASPHALT EDGE
CI	CURB INLET	---	BRUSH LINE
EB	ELECTRIC BOX (PANEL)	---	OVERHEAD ELEC.
EH	FIRE HYDRANT	---	U.G. ELECTRIC
GI	GRATE INLET	---	U.G. TELE. LINE
IR	INLET RIM	---	U.G. FIBER OPTIC
IRREF	INVERT REFERENCE	---	SUBJECT PROPERTY LINE
ICV	IRRIGATION CONTROL VALVE	---	EXISTING EASEMENT LINE
PP	POWER POLE	---	BUILDING SETBACK LINE
SC	SAN. SEWER CLEANOUT	---	PROPOSED EASEMENT
SDM	STORM DRAIN MANHOLE	---	PHOTO LOCATION REFERENCE
TR	TELEPHONE RISER	---	CONCRETE AREA
		(T)	TREE (AS DESCRIBED)

**\* GENERAL NOTES \***

- The bearings and distances shown hereon are based on a local coordinate system based on NAD83, Texas North Central Zone 4202, scaled from grid to surface at N: 7,017,297.742 and E: 2,595,433.371 using a combined scale factor of 1.0001466844, derived from GPS RTK observations using the North Texas VRS Network (maintained by Western Data Systems).
- According to the Flood Insurance Rate Map published by the Federal Emergency Management Agency, Department of Homeland Security, the subject property appears to be located in Zone "X" (areas determined to be outside the 0.2 % annual chance floodplain) as shown on Map No. 48113C0265K; map revised July 7, 2014, for Rockwall County and incorporated areas. This flood statement does not imply that the property and/or structures located in Zone "X" will be free from flooding or flood damage. This flood statement shall not create liability on the part of the Surveyor.
- Underground utilities shown hereon were taken from record information, actual locations were not field verified except at surface structures such as manholes, fire hydrants, etc. No attempt has been made as a part of this survey to confirm, obtain or show data concerning the depth or condition of any utility or municipal/public service facility. Subsurface and environmental conditions were not examined or considered as a part of this Survey. No statement is made concerning the existence of underground or overhead containers or facilities, which may affect the use or development of the subject tract of land.
- All visible underground utilities that were marked from Texas One Call 811 are shown on this survey. Underground Sewer, Water and Storm Drain lines shown are from visible evidence and provided utility plans. Pipe sizes of all underground utilities were unknown at the time of survey.
- The size or shape of the tree/bush symbols included hereon do not necessarily represent the actual size and shape of the corresponding trees/bushes or their canopies. They represent location only.
- The Surveyor has no knowledge of any changes in street right-of-way lines either completed or proposed. Surveyor hereby advises all interested parties to consult with the City of Rockwall concerning this subject prior to planning, designing or constructing improvements near any right-of-way.

**\* METES AND BOUNDS DESCRIPTION \***

BEING a 2.0767 acre tract of land located in the John D. McFarland Survey, Abstract No. 145, City of Rockwall, Rockwall County, Texas, said 2.0767 acre tract of land being a portion of a called 14.45 acre tract of land conveyed to ROCKWALL RENTAL PROPERTIES, L.P., by deed thereof filed for record in Volume 4076, Page 48, Deed Records, Rockwall County, Texas (D.R.R.C.T.), said 2.0767 acre tract of land being more particularly described by metes and bounds as follows:

**BEGINNING** at a 5/8 inch iron rod with a cap stamped "ADAMS" found (Controlling Monument) at the west lot corner of Lot 1, Block 1, Rockwall-Pine Addition, being an Addition to the said City and State, according to the plat thereof filed for record in Rockwall County Clerk's Instrument No. 201600009386, Official Public Records, Rockwall County, Texas, from said beginning point, a 1/2 inch iron rod found (Controlling Monument) at the most southerly lot corner of Lot 2, Block 1, Rockwall-Pine Addition, being an Addition to the said City and State, according to the plat thereof filed for record in Cabinet H, Slide 5, Plat Records, Rockwall County, Texas, bears North 44°16'42" East, a distance of 15.16 feet;

**THENCE** South 45°25'56" East, along the southwest lot line of said Lot 1, a distance of 407.64 feet to an "X" cut in concrete set at the most southerly lot corner of said Lot 1, said "X" cut set also being at the most easterly northeast property corner of the aforesaid 14.45 acre tract, and being on the existing northwest right-of-way line of Interstate Highway No. 30W (being a variable width right-of-way, a portion of said right-of-way being conveyed to the State of Texas, by deed thereof filed for record in Volume 59, Page 226, Deed Records, Rockwall County, Texas), said "X" cut found also being at the beginning of a non-tangent curve to the right having a radius of 3,669.86 feet;

**THENCE** along the southeast property line of the said 14.45 acre tract and along the said northwest right-of-way line, with said curve to the right, an arc length of 220.57 feet, and across a chord which bears South 43°29'42" West, a chord length of 220.54 feet to a 5/8 inch iron rod with a cap stamped "SPOONER & ASSOCIATES" set (hereinafter referred to as an iron rod set) at the south property corner of the herein described tract of land;

**THENCE** North 45°25'56" West, departing the said property line and the said right-of-way line, over and across the said 14.45 acre tract, a distance of 410.65 feet to an iron rod set;

**THENCE** North 44°16'42" East, continuing over and across the said 14.45 acre tract, a distance of 220.50 feet to the **POINT OF BEGINNING**.

The hereinabove described tract of land contains a computed area of **2.0767 acres (90,460 square feet)** of land, more or less.

**\* TITLE COMMITMENT NOTES \***

This ALTA/NSPS Land Title Survey was prepared with the benefit of a copy of the commitment for Title Insurance prepared by First National Title Insurance Company, File No. 16-273752-RW, having an effective date of September 14, 2016 and issued September 25, 2016; and only reflects those easements, covenants, restrictions, and other matters of record listed in Schedule B of said Commitment. No other research for matters of record, not listed in said Commitment, was performed by Spooner & Associates, Inc.

Schedule "B" Items

- Restrictive Covenants  
Volume 1865, Page 99, D.R.R.C.T.  
(Subject property is not a portion of the tract of land described in said document)
- Easements and Building Lines  
Cabinet B, Slide 383, P.R.R.C.T.  
(Subject property is not a portion of the tract of land shown on said plat)
- 10h Texas Power & Light Co. Easement  
Volume 60, Page 521, D.R.R.C.T.  
(Shown ~ Blanket in nature ~ Easement width not defined)
- 10i Texas Power & Light Co. Easement  
Volume 68, Page 624, D.R.R.C.T.  
(Shown ~ Blanket in nature ~ Easement width not defined)
- 10j Special Warranty Deed  
Volume 1865, Page 99, D.R.R.C.T.  
(Subject property is not a portion of the tract of land described in said document)
- 10k Reciprocal Easement Agreement  
R.C.C.I. No. 2016000010815, O.P.R.R.C.T.  
(Subject to ~ Subject property is a portion of the tract of land described in said document)
- 10l 15' Utility Easement  
R.C.C.I. No. 2016000004241, O.P.R.R.C.T.  
(Shown)

**\* ZONING INFORMATION \***

The subject property is currently zoned "C" (Commercial) within the IH-30 Overlay (IH-30 OV) District, per the City of Rockwall Zoning Map.

The Surveyor hereby advises the developer to contact the City of Rockwall Planning and Zoning Department to further verify all Zoning Restrictions prior to the development of the subject property.

**\* SURVEYOR'S STATEMENT \***

To: ROCKWALL RENTAL PROPERTIES, L.P., TEXAS ROADHOUSE HOLDINGS, LLC, a Texas limited partnership, and First National Title Insurance Company

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 minimum standard detail requirements for ALTA/NSPS land title surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 5, 6(a)(b), 7(a)(b1)(b2), 8, 9, 11, 13, 14, 16, 17, 20 & 21 of Table A thereof.

Surveyed on the ground October 6, 2016 and re-surveyed on the ground June 20, 2017

**THIS DOCUMENT IS PRELIMINARY FOR REVIEW PURPOSES ONLY ERIC S. SPOONER, R.P.L.S. 12-8-17**

Eric S. Spooner, R.P.L.S. Date  
Texas Registration No. 5922  
TBPLS Firm No. 10054900

PICTURE NO. 1



PICTURE NO. 2



**CONTROL TABLE**

POINT #	DESCRIPTION	NORTHING	EASTING	ELEVATION
904	5/8" CIRS "S&A CONTROL"	7017006.98	2595189.56	568.90'
905	5/8" CIRS "S&A CONTROL"	7017130.99	2595335.98	568.16'
906	5/8" CIRS "S&A CONTROL"	7017286.43	2595504.24	567.84'
907	5/8" CIRS "S&A CONTROL"	7017410.59	2595419.94	569.78'



ALTA/NSPS SURVEY OF  
2.0767 ACRES OF LAND  
LOCATED IN THE JOHN D.  
MCFARLAND SURVEY ABSTRACT  
NO. 145, CITY OF ROCKWALL,  
ROCKWALL COUNTY, TEXAS



**GreenbergFarrow**

DATE: 12/08/2017  
S&A JOB NO. 16-156  
G.F. JOB NO. 20151291  
SCALE: 1" = 30'  
DRAWN BY: C. REEDER  
CHECKED BY: E. SPOONER

REVISIONS:  
1. UPDATED TOPO TO REFLECT NEWLY CONSTRUCTED ADJACENT LOT/CURT  
2. UPDATED TOPO TO REFLECT FILL DIRT ADDED TO SITE 12-8-17

SHEET  
**1**  
OF 1