X-XXXXX

THE CITY OF FORT WORTH, TEXAS

TRANSPORTATION & PUBLIC WORKS

FORT WORTH

PLANS FOR THE CONSTRUCTION OF

NORTH BEACH STREET IMPROVEMENTS

NE LOOP 820 TO FOSSIL CREEK BOULEVARD

DESIGN SPEED:

NORTH BEACH STREET = 40 MPH
NE LOOP 820 WBFR = 45 MPH
NE LOOP 820 EBFR = 45 MPH

NOTES:

ALL CONSTRUCTION WITHIN THE STATE RIGHT OF WAY WILL REQUIRE COMPLIANCE TO TXDOT STANDARD SPECIFICATIONS, STANDARD PLANS, AND TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014, AND SPECIFICATION ITEMS LISTED AS FOLLOWS SHALL GOVERN ON THIS PROJECT FOR ALL WORK WITHIN THE STATE RIGHT OF WAY.

BY SEALING AND SIGNING THESE PERMIT PLANS AS A PROFESSIONAL CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, I CERTIFY THAT THE PROPOSED DRIVEWAY OR PUBLIC STREET CONNECTION(S) TO THE STATE ROADWAY MEETS OR EXCEEDS THE MINIMUM STOPPING SIGHT DISTANCE REQUIRED FOR A POSTED SPEED OF 40 MILES PER HOUR, BASED ON THE MOST RECENT TXDOT DESIGN MANUAL REQUIREMENTS.

CITY OF FORT WORTH SPECIFICATIONS SHALL GOVERN FOR ITEMS OUTSIDE OF THE STATE RIGHT OF WAY.

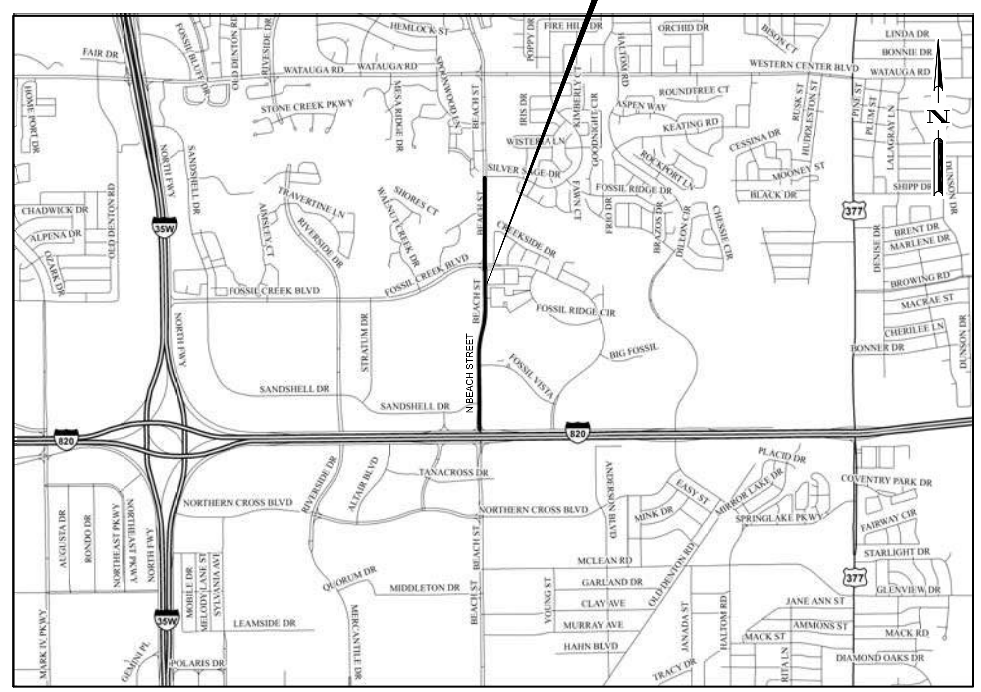
BETSY PRICE
MAYOR

DAVID COOKE
CITY MANAGER

DOUGLAS W. WIERSIG, P.E.
DIRECTOR, TRANSPORTATION AND PUBLIC WORKS DEPARTMENT

JOHN ROBERT CARMAN
WATER DIRECTOR

PROJECT LOCATION



LOCATION MAP
N.T.S.

D.O.E. NO.	7237
FILE NO.	K-
TPW PROJECT NO.	C210-531200-204230223830
WATER PROJECT NO.	PXXX-
SEWER PROJECT NO.	PXXX-
CITYPROJECT NO.	02238

DOUGLAS W. WIERSIG, P.E. DATE
DIRECTOR, TRANSPORTATION & PUBLIC WORKS DEPARTMENT

ANDREW T. CRONBERG, P.E. DATE
ASSISTANT DIRECTOR, WATER DEPARTMENT

RECOMMENDED: MARTIN PHILLIPS, P.E. DATE
ENGINEERING MANAGER

REVIEWED: MICHAEL WEISS, P.E. DATE
PROJECT MANAGER

90%
SUBMITTAL
FOR FINAL DESIGN REVIEW

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BROWN & GAY ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
J.T. AULDRIDGE, P.E.
TEXAS REGISTRATION NO. 98223
April 22, 2015

BGE
Brown & Gay Engineers, Inc.
500 West 7th St., Suite 1800, Fort Worth, TX 76102
Tel: 817-887-6130 • www.browngay.com
TBPE Registration No. F-1046

APRIL 2015

X-XXXXX

DOE # 7237
K-XXXXX
X-XXXXX
TPW PROJECT NO. C210-531200-204230223830
WATER PROJECT NO. PXXX-XXXXXXXXXXX
SEWER PROJECT NO. PXXX-XXXXXXXXXXXX

NORTH BEACH STREET IMPROVEMENTS
NE LOOP 820 TO FOSSIL CREEK BOULEVARD

X-XXXXX

THE CITY OF FORT WORTH, TEXAS

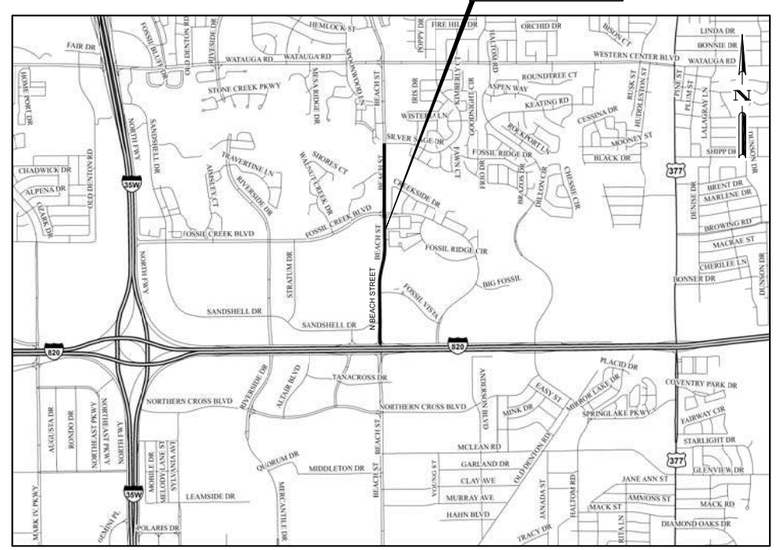
WATER DEPARTMENT

PLANS FOR THE CONSTRUCTION OF

NORTH BEACH STREET IMPROVEMENTS

NE LOOP 820 TO FOSSIL CREEK BOULEVARD

PROJECT LOCATION



LOCATION MAP
N.T.S.

BETSY PRICE
MAYOR

DAVID COOKE
CITY MANAGER

JOHN ROBERT CARMAN
WATER DIRECTOR

DOUGLAS W. WIERSIG, P.E.
DIRECTOR, TRANSPORTATION AND PUBLIC WORKS DEPARTMENT

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CITYPROJECT NO. 02238

JOHN ROBERT CARMAN — DATE
WATER DIRECTOR

ANDY ANDERSON, P.E. — DATE
ASSISTANT DIRECTOR, TRANSPORTATION & PUBLIC WORKS DEPT

RECOMMENDED: MARTIN PHILLIPS, P.E. — DATE
ENGINEERING MANAGER

REVIEWED: MICHAEL WEISS, P.E. — DATE
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NORTH BEACH STREET IMPROVEMENTS
NE LOOP 820 TO FOSSIL CREEK BOULEVARD

LEGEND

EXISTING

- CHAIN LINK FENCE
- WIRE FENCE
- MISC. FENCE
- WOOD FENCE
- GUARDRAIL
- TELEPHONE
- FIBER OPTIC
- GAS
- TRAFFIC SIGNAL
- OVERHEAD ELEC
- ASPHALT
- SANITARY SEWER (6" SSWR L-5858)
- WATER (12" WTR)
- STORM SEWER (24" CMP)
- UNDERGROUND ELEC
- UNDERGROUND CABLE
- R.O.W. LINE
- LOT LINE
- EASEMENT LINE
- CONTROL POINT
- STREET LIGHT
- LIGHT POLE
- FLOOD LIGHT
- WATER MANHOLE
- WATER METER
- WATER VAULT
- WATER VALVE
- SS MANHOLE
- SS CLEANOUT
- SIGN
- UG GAS MARKER
- GAS MANHOLE
- FIRE HYDRANT
- PULL BOX ELECTRIC
- ELECTRIC BOX
- ELECTRIC VAULT
- ELECTRIC METER
- ELECTRIC MANHOLE
- UG ELECTRIC MARKER
- TELEPHONE VAULT
- PULL BOX TELEPHONE
- TELEPHONE BOX
- TELEPHONE MANHOLE
- UG TELEPHONE MARKER
- TREE
- TRAFFIC SIGNAL POLE
- POWER POLE
- PP W/CROSS ARM (LENGTH IN FEET)
- FLAG POLE
- IRRIGATION CONTROL VALVE
- VALVE (TYPE UNKNOWN)
- VAULT (TYPE UNKNOWN)
- STORM DRAIN MANHOLE
- UG FIBER OPTIC MARKER

PROPOSED

- SANITARY SEWER MANHOLE
- WATER VALVE
- WATER TEE
- FIRE HYDRANT
- WATER LINE
- SANITARY SEWER LINE
- STORM DRAIN JUNCTION BOX
- CURB INLET
- STORM DRAIN

ABBREVIATIONS

A	
APPROX	APPROXIMATE
AVG	AVERAGE
B	
BC	BACK OF CURB
BOC	BY OPEN CUT
BOTOC	BY OTHER THEN OPEN CUT
BOV	BLOW OFF VALVE
C	
CAV	COMBINATION AIR VALVE
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
COEFF	COEFFICIENT
CONC	CONCRETE
CP	CONTROL POINT
D	
DIA	DIAMETER
E	
E	EASTING
ELEC	ELECTRIC
ELEV	ELEVATION
ESMT	EASEMENT
EXST	EXISTING
EXST G	EXISTING GROUND
EBFR	EAST BOUND FRONTAGE ROAD
F	
FC	FACE OF CURB
FH	FIRE HYDRANT
FL	PIPE FLOW LINE
G	
GV&B	GATE VALVE AND BOX
H	
HP	HIGH POINT
I	
IN	INCH
INV	INVERT
J	
JB	JUNCTION BOX
L	
L	LENGTH
LF	LINEAR FEET
LP	LOW POINT
LT	LEFT
M	
MAX	MAXIMUM
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MID	MIDPOINT
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
N	
N	NORTHING
NG	NATURAL GROUND
NO	NUMBER
NTS	NOT TO SCALE
O	
OD	OUTSIDE DIAMETER
P	
PI	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PGL	PROFILE GRADE LINE
PT	POINT OF TANGENCY
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE (PVC) PIPE
PVT	POINT OF VERTICAL TANGENCY
R	
R	RADIUS
RCB	REINFORCED CONCRETE BOX
RCCP	RINFORCED CONCRETE CYLINDER
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
ROW	RIGHT-OF-WAY
RT	RIGHT
S	
SAG	SAG CURVE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SPEC	SPECIFICATION
SS	SANITARY SEWER
SSMH	SEWER MANHOLE
STA	STATION
STD	STANDARD
SY	SQUARE YARD
T	
T	TANGENT LENGTH
TC	TOP OF CURB
TOP	TOP OF PIPE
TP	TOP OF PAVEMENT
TYP	TYPICAL
V	
VC	VERTICAL CURVE
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
W	
WL	WATER LINE
W/	WITH
WBFR	WEST BOUND FRONTAGE ROAD

SHEET INDEX

SHEET NO	DESCRIPTION
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7	GENERAL CONSTRUCTION NOTES – SHEET 4 OF 4
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161	TXDOT DETAILS – SHEET 6 OF 16**
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165	TXDOT DETAILS – SHEET 10 OF 16**
166	TXDOT DETAILS – SHEET 11 OF 16**
167	TXDOT DETAILS – SHEET 12 OF 16**
168	TXDOT DETAILS – SHEET 13 OF 16**
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L1.4	PLANTING PLAN – STA 108+50 TO STA 112+00
L1.5	PLANTING PLAN – STA 112+00 TO STA 115+50
L1.6	PLANTING PLAN – STA 115+50 TO STA 119+00
L1.7	PLANTING PLAN – STA 119+00 TO STA 122+00
L1.8	PLANTING PLAN – STA 122+00 TO STA 125+50
L1.9	PLANTING PLAN – STA 125+50 TO STA 129+00
L1.10	PLANTING PLAN – STA 129+00 TO STA 132+50
L1.11	PLANTING PLAN – STA 132+50 TO STA 137+05
L1.12	PLANTING DETAILS
L2.1	IRRIGATION PLAN – STA 98+50 TO STA 101+50
L2.2	IRRIGATION PLAN – STA 101+50 TO STA 105+00
L2.3	IRRIGATION PLAN – STA 105+00 TO STA 108+50
L2.4	IRRIGATION PLAN – STA 108+50 TO STA 112+00
L2.5	IRRIGATION PLAN – STA 112+00 TO STA 115+50
L2.6	IRRIGATION PLAN – STA 115+50 TO STA 119+00
L2.7	IRRIGATION PLAN – STA 119+00 TO STA 122+00
L2.8	IRRIGATION PLAN – STA 122+00 TO STA 125+50
L2.9	IRRIGATION PLAN – STA 125+50 TO STA 129+00
L2.10	IRRIGATION PLAN – STA 129+00 TO STA 132+50
L2.11	IRRIGATION PLAN – STA 132+50 TO STA 137+05
L2.12	IRRIGATION DETAILS
U1	SUE PLAN SHEET – STA 100+00 TO STA 101+50
U2	SUE PLAN SHEET – STA 101+50 TO STA 105+00
U3	SUE PLAN SHEET – STA 105+00 TO STA 108+50
U4	SUE PLAN SHEET – STA 108+50 TO STA 112+00
U5	SUE PLAN SHEET – STA 112+00 TO STA 115+50
U6	SUE PLAN SHEET – STA 115+50 TO STA 119+00
U7	SUE PLAN SHEET – STA 119+00 TO STA 122+00
U8	SUE PLAN SHEET – STA 122+00 TO STA 125+50
U9	SUE PLAN SHEET – STA 125+50 TO STA 129+00
U10	SUE PLAN SHEET – STA 129+00 TO STA 132+50
U11	SUE PLAN SHEET – STA 132+50 TO STA 137+42.50
U12	SUE PLAN SHEET – STA 137+42.50 TO END

** THE STANDARD SHEETS, SPECIFICALLY IDENTIFIED IN THIS INDEX OF SHEETS, HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

J.T. AULDRIDGE, P.E. DATE

90%
SUBMITTAL
FOR FINAL DESIGN REVIEW

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BROWN & GAY ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
J.T. AULDRIDGE, P.E.
TEXAS REGISTRATION NO. 98223
April 22, 2015

REV.	DESCRIPTION	BY	DATE

FORT WORTH CITY OF FORT WORTH, TEXAS TRANSPORTATION & PUBLIC WORKS

NORTH BEACH STREET
NE LOOP 820 TO FOSSIL CREEK BOULEVARD

LEGEND ABBREVIATIONS AND SHEETS INDEX

BGE
Brown & Gay Engineers, Inc.
500 West 7th St., Suite 1800, Fort Worth, TX 76102
Tel: 817-887-6130 • www.browngay.com
TBPE Registration No. F-1046

DESIGNED: MLF/LNH	DATE	SCALE	PROJECT NO.	Sheet
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BROWN & GAY ENGINEERS, INC.
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TPW: C210 531200 204230223830 WATER: PXXX-XXXXXXXXXXX SEWER: PXXX-XXXXXXXXXXX K-XXXXXX DGE # 7237
X-XXXXXX
NORTH BEACH STREET IMPROVEMENTS – NE LOOP 820 TO FOSSIL CREEK BOULEVARD

DIVISION 01 - GENERAL REQUIREMENTS

GENERAL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE CITY AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION OR DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION AND FOR THE SAFETY AND PROTECTION THEREOF AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY ITEM OF WORK, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED OWNERS (UTILITY COMPANIES) OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

   a. NOTIFY TEXAS 811 (1-800-DIG-TESS OR WWW.TEXAS811.ORG) TO LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION.

   b. CAUTION! BURIED ELECTRIC LINES MAY EXIST ALONG THIS PROJECT. CONTACT ELECTRICAL PROVIDERS 48 HOURS PRIOR TO EXCAVATION :

•ONCOR	JOHN GUTIERREZ	817-443-3489

   c. CAUTION! BURIED GAS LINES MAY EXIST ALONG THIS PROJECT. CONTACT ATMOS ENERGY 48 HOURS PRIOR TO EXCAVATION, AND WITHIN TWO (2) HOURS OF ENCOUNTERING A GAS LINE (JOHN CRANE: 817-215-4366)

   d. CAUTION! BURIED COMMUNICATION CABLES MAY EXIST ALONG THIS PROJECT. CONTACT COMMUNICATION COMPANIES 48 HOURS PRIOR TO EXCAVATION:

•AT&T	GARY TILROY	817-338-6202
•CHARTER COMMUNICATIONS	GREG PIAT	817-298-3625
•FIBERLIGHT	TIM FITZMAURICE	817-522-0447
•TW TELECOM FW	WARREN COLLETON	817-509-2200

   e. CAUTION! WHEN DOING WORK WITHIN 200 FEET OF ANY SIGNALIZED INTERSECTION, THE CONTRACTOR SHALL NOTIFY TRAFFIC MANAGEMENT DIVISION OF CITY OF FORT WORTH T/PW, 72 HOURS PRIOR TO EXCAVATION (817-392-8100). THE CONTRACTOR SHALL PROTECT EXISTING SIGNAL HARDWARE, GROUND BOXES, DETECTION LOOPS, AND UNDERGROUND CONDUIT AT SIGNALIZED INTERSECTIONS. ANY DAMAGES AT SIGNALIZED INTERSECTIONS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT THE CITY AT 817-392-8100 TO PERFORM CONDUIT LINE LOCATES AT SIGNALIZED INTERSECTIONS 72 HOURS PRIOR TO COMMENCING WORK AT THE INTERSECTION.

   f. THE CONTRACTOR SHALL NOTIFY THE CITY OF FORT WORTH PROJECT MANAGER 48 HOURS PRIOR TO THE START OF ANY EXCAVATION (MICHAEL WEISS: 817-392-8485)

2. CONTRACTOR'S PERSONNEL SHALL HAVE IDENTIFYING CLOTHING, HATS OR BADGES AT ALL TIMES WHICH IDENTIFY THE CONTRACTOR'S NAME, LOGO OR COMPANY. IDENTIFICATION IS REQUIRED ON VEHICLES AS WELL.

3. PROTECT CONCRETE CURB AND GUTTER, DRIVEWAYS, AND SIDEWALKS THAT ARE NOT DESIGNATED FOR REMOVAL. REMOVAL AND REPLACEMENT OF THESE ITEMS SHALL BE AS DESIGNATED IN THE DRAWINGS.

DIVISION 32 - EXTERIOR IMPROVEMENTS

GENERAL:

1. AT LOCATIONS WHERE THE CURB AND GUTTER ARE TO BE REPLACED, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE RE-ESTABLISHMENT OF EXISTING STREET AND GUTTER GRADES. ESTABLISHMENT OF GRADES SHALL BE CONSIDERED AS A SUBSIDIARY ITEM OF WORK, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS.

2. ALL DRIVEWAYS, WHICH ARE OPEN CUT, SHALL HAVE AT LEAST A TEMPORARY DRIVING SURFACE AT THE END OF EACH DAY. THE TEMPORARY SURFACE SHALL BE CONSIDERED AS A SUBSIDIARY ITEM OF WORK. THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS.

BIKE LANES AND SHARED PAVEMENT MARKINGS:

1. PROPOSED BIKE LANES SHOULD MAINTAIN A MINIMUM EFFECTIVE WIDTH OF 4 FEET (MEASURED FROM EDGE OF GUTTER TO CENTER OF STRIPE).

2. BICYCLE PAVEMENT MARKINGS SHOULD BE LOCATED 20 FEET FROM THE CURB RETURN, STOP BAR, OR CROSS WALK (WHICHEVER IS APPLICABLE) UNLESS DENOTED OTHERWISE IN THE DRAWINGS.

3. COMBINED WIDTH OF BIKE LANE AND ON-STREET PARKING SHOULD NOT BE LESS THAN 13 FEET.

4. IF TRAVEL LANE IS GREATER THAN 14 FEET WIDE, SHARED PAVEMENT MARKINGS SHALL BE PLACED 4 FEET FROM FACE OF CURB OR EDGE OF ON-STREET PARKING (WHICHEVER IS APPLICABLE).

5. IF TRAVEL LANE IS LESS THAN OR EQUAL TO 14 FEET WIDE, SHARED PAVEMENT MARKINGS SHALL BE PLACED IN THE MIDDLE OF THE TRAVEL LANE.

6. BIKE LANE SYMBOL, ARROW, AND SHARED PAVEMENT MARKINGS SHOULD BE REPEATED AT THE BEGINNING OF EACH INTERSECTION.

7. ON UNINTERRUPTED SECTIONS OF ROADWAY, BIKE LANE SYMBOL AND ARROW SHOULD NOT BE SPACED MORE THAN 330 FEET APART AND SHARED PAVEMENT MARKINGS SHOULD NOT BE SPACED MORE THAN 250 FEET APART.

8. BIKE LANE SYMBOL, ARROW, AND SHARED PAVEMENT MARKINGS SHOULD NOT BE PLACED AT PRIVATE DRIVEWAYS OR PUBLIC INTERSECTIONS.

9. BIKE LANE STRIPING SHOULD BE 4 INCHES SOLID WHITE, HOT-APPLIED THERMOPLASTIC UNLESS SPECIFIED OTHERWISE IN THE DRAWINGS. ALL OTHER BIKE LANE PAVEMENT MARKINGS SHALL ALSO BE WHITE, HOT APPLIED THERMOPLASTIC UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS.

10. ALL DIMENSIONS ARE FROM FACE OF CURB AND ARE TO CENTER OF THE PAVEMENT MARKING.

11. SHARED PAVEMENT MARKINGS SHOULD NOT BE USED ON FACILITIES WITH A POSTED SPEED GREATER THAN 35 MPH.

SIDEWALKS AND CURB RAMPS:

1. THE CURB RAMP STANDARD DETAILS ARE INTENDED TO SHOW TYPICAL LAYOUTS FOR THE CONSTRUCTION OF THE CURB RAMPS. THE INFORMATION SHOWN ON THE STANDARD DETAILS MEET THE REQUIREMENTS SHOWN IN THE "2012 TEXAS ACCESSIBILITY STANDARDS" (TAS) AND THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN" BY THE DEPARTMENT OF JUSTICE.

2. CITY OF FORT WORTH STANDARD DETAILS ARE ONLY INTENDED TO INDICATE PAY LIMITS FOR EACH TYPE OF RAMP, THE ENGINEER IS RESPONSIBLE FOR THE DEVELOPMENT AND DESIGN OF THE SIDEWALK AND CURB RAMP LAYOUT, INCLUDING ACTUAL DIMENSIONS AND SLOPE PERCENTAGES.

3. THE CONTRACTOR MAY NOT MAKE CHANGES TO THE SIDEWALK AND CURB RAMP LAYOUT WITHOUT APPROVAL OF THE CITY. THE CONTRACTOR MAY PROPOSE CHANGES TO THE SIDEWALK AND CURB RAMP LAYOUT DUE TO FIELD CONDITIONS, BUT ANY PROPOSED CHANGES MUST BE APPROVED BY THE CITY.

4. CURB RAMP RUNNING SLOPES SHALL NOT BE STEEPER THAN 8.3% (12:1). ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED BY THE CITY.

5. CURB RAMP FLARE SLOPES SHALL NOT BE STEEPER THAN 10% (10:1) AS MEASURED ALONG BACK OF CURB.

6. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2%.

7. THE MINIMUM WIDTH OF SIDEWALKS AND CURB RAMPS SHALL BE 4 FEET.

8. LANDINGS SHALL BE PROVIDED AT THE TOP OF CURB RAMPS. THE LANDING CLEAR LENGTH SHALL BE 5 FEET MINIMUM FROM THE END OF RAMP. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARES. THE LANDING SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.

9. IN ALTERATIONS WHERE THERE IS NO LANDING AT THE TOP OF THE CURB RAMP, CURB RAMP FLARES SHALL BE PROVIDED AND SHALL NOT BE STEEPER THAN 8.3% (12:1).

10. WHERE TURNING IS REQUIRED, MANEUVERING SPACE AT THE TOP AND BOTTOM OF CURB RAMPS SHALL BE 5 FEET BY 5 FEET MINIMUM. THE SPACE AT THE BOTTOM SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS AND SHALL NOT PROJECT INTO VEHICULAR TRAFFIC LANES.

11. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR BECAUSE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.

12. WHERE CURB RAMPS ARE PROVIDED, CROSSWALK MARKINGS SHALL BE REQUIRED AND RAMPS SHALL BE ALIGNED WITH THE CROSSWALK.

13. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 5% (20:1) IN ANY DIRECTION.

DIVISION 33 - UTILITIES

GENERAL:

1. FOR UTILITY WORK WITHIN UTILITY EASEMENTS, ONCE PIPE OR APPURTENANCES HAVE BEEN INSTALLED OR REHABILITATED, IMMEDIATELY COMMENCE TEMPORARY SURFACE RESTORATION. COMPLETE SURFACE RESTORATION TO THE OWNER'S SATISFACTION WITHIN SEVEN (7) DAYS OF WORK FINISHING ON-SITE. FAILURE TO MAINTAIN SURFACE RESTORATION, AS NOTED ABOVE, MAY RESULT IN SUSPENSION OF WORK UNTIL RESTORATION IS COMPLETE.

2. EXISTING VERTICAL DEFLECTIONS AND PIPE SLOPES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND HAVE NOT BEEN FIELD VERIFIED, UNLESS OTHERWISE NOTED. RIM ELEVATIONS, FLOW LINES, AND HORIZONTAL LOCATIONS OF EXISTING MANHOLES WERE DETERMINED FROM FIELD SURVEY. IF FIELD CONDITIONS VARY FROM THOSE SHOWN ON DRAWINGS CONTRACTOR SHALL NOTIFY CITY.

3. MAINTAIN ALL EXISTING WATER AND SEWER CONNECTIONS TO CUSTOMERS IN WORKING ORDER AT ALL TIMES, EXCEPT FOR BRIEF INTERRUPTIONS IN SERVICE FOR WATER AND SEWER SERVICES TO BE REINSTATED. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN OUT OF SERVICE OVERNIGHT.

4. ESTABLISH AND MAINTAIN A TRENCH SAFETY SYSTEM IN ACCORDANCE WITH THE EXCAVATION SAFETY PLAN AND FEDERAL, STATE OR LOCAL SAFETY REQUIREMENTS.

5. PROVIDE AND FOLLOW APPROVED CONFINED SPACE ENTRY PROGRAM IN ACCORDANCE WITH OSHA REQUIREMENTS. CONFINED SPACES SHALL INCLUDE MANHOLES AND ALL OTHER CONFINED SPACES IN ACCORDANCE WITH OSHA'S PERMIT REQUIRED FOR CONFINED SPACES.

6. ONLY CITY PREQUALIFIED CONTRACTORS, BY APPROPRIATE WATER DEPARTMENT WORK CATEGORY, SHALL BE ALLOWED TO ADJUST VALVE BOXES, MANHOLES, RING & COVERS, ETC.

WATER:

1. PROVIDE THRUST RESTRAINT BY MEANS OF RESTRAINING JOINTS AT FITTINGS AND CONCRETE BLOCKING. WHEN SPECIFICALLY INDICATED ON THE DRAWINGS, PROVIDE THRUST RESTRAINT AT DESIGNATED JOINTS BEYOND THE FITTINGS. EACH METHOD SHALL BE CAPABLE OF THRUST RESTRAINT INDEPENDENT OF THE OTHER SYSTEM. THE CONTRACTOR SHALL REFER TO CITY STANDARD DETAILS FOR AREA REQUIRED TO INSTALL CONCRETE BLOCKING.

2. ALL DUCTILE IRON MECHANICAL JOINT FITTINGS SHALL BE RESTRAINED TO PIPE USING RETAINER GLANDS.

3. PROPOSED WATER MAINS SHALL HAVE A MINIMUM COVER OF 48-INCHES COVER ABOVE THE TOP OF PIPE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS OR DETAILS.

4. ALL WATER SERVICES SHALL BE INSTALLED ABOVE STORM SEWERS, EXCEPT WHERE SHOWN OTHERWISE IN THE DRAWINGS.

5. ELEVATION ADJUSTMENT AT CONNECTIONS MAY BE MADE WITH BENDS, OFFSETS, OR JOINT DEFLECTIONS. JOINT DEFLECTIONS SHALL NOT EXCEED FIFTY PERCENT (50%) OF MANUFACTURER'S RECOMMENDATIONS.

6. TEMPORARY PRESSURE PLUGS REQUIRED FOR SEQUENCING OF CONSTRUCTION AND TESTING OF PROPOSED WATER LINES SHALL BE CONSIDERED SUBSIDIARY TO THE WORK AND SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS.

SANITARY SEWER:

1. VERIFY THAT ALL CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE FOR SANITARY SEWER ONLY. NOTIFY CITY OF ANY DISCOVERED ILLICIT CONNECTIONS.

2. THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGES TO PROPERTIES, HOMES, AND BASEMENTS FROM BACKUP, WHICH MAY RESULT DURING THE INSTALLATION OF NEW PIPE AND/OR ABANDONMENT OF EXISTING PIPE. THE CONTRACTOR WILL BE ALLOWED TO OPEN CLEAN OUTS WHERE AVAILABLE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CLEAN UP ASSOCIATED WITH OPENING CLEAN OUTS.

3. FOR ALL SANITARY SEWER SERVICE CONNECTIONS AT MANHOLES, PROVIDE A HYDRAULIC SLIDE IN ACCORDANCE WITH THE DETAILS.

STORM DRAIN:

1. MAINTAIN THE EXISTING STORM DRAINAGE SYSTEM UNTIL THE PROPOSED SYSTEM IS IN SERVICE. IN NO CASE SHOULD THE CONTRACTOR LEAVE THE EXISTING STORM DRAIN OUT OF SERVICE WHEREBY RUNOFF WOULD CAUSE DAMAGE TO ADJACENT PROPERTY.

2. CONSTRUCT ALL DRAINAGE IMPROVEMENTS FROM THE DOWNSTREAM END TO THE UPSTREAM END TO ALLOW CONTINUED STORM DRAIN SERVICE. IF THE CONTRACTOR PROPOSES TO CONSTRUCT THE SYSTEM OTHERWISE, THE CONTRACTOR SHALL SUBMIT A SEQUENCING PLAN TO THE CITY FOR APPROVAL.

3. TAKE APPROPRIATE MEASURES TO PRESERVE WILDLIFE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL GUIDELINES.

DIVISION 34 - TRANSPORTATION

GENERAL:

1. NOTIFY TRAFFIC MANAGEMENT DIVISION (817-392-7738) AT LEAST ONE WEEK PRIOR TO STARTING WORK ON TRAFFIC SIGNALS.

2. NOTIFY TRAFFIC MANAGEMENT DIVISION (817-392-7738) PROJECT REPRESENTATIVE AT LEAST 24-HOURS IN ADVANCE OF ALL CONCRETE POURS. INSPECTOR MUST BE PRESENT WHEN CONCRETE IS PLACED ON THE PROJECT SITE.

3. EQUIPMENT SUPPLIED BY THE CITY WILL BE AVAILABLE FOR PICK UP FROM THE TRANSPORTATION/PUBLIC WORKS (T/PW) WAREHOUSE AT 5001 JAMES AVENUE OR OTHER SITES DESIGNATED BY THE CITY. THE PROJECT REPRESENTATIVE MUST AUTHORIZE ALL EQUIPMENT PICKUPS.

4. ALL PIER FOUNDATIONS SHALL HAVE ONE CONTINUOUS CONCRETE POUR.

5. NO TRAFFIC SIGNAL POLES SHALL BE PLACED ON FOUNDATIONS UNTIL SEVEN DAYS HAVE ELAPSED FOLLOWING THE POURING OF CONCRETE.

6. INSTALL THE REQUIRED ELECTRIC SERVICES AND OBTAIN AN ELECTRICAL SERVICE PERMIT IN EACH INSTANCE, THE COST OF WHICH WILL BE WAIVED BY THE CITY.

SIGNS:

1. ALL SIGNS AND HARDWARE SHOWN IN THE DRAWINGS WILL BE FURNISHED BY THE CONTRACTOR, EXCEPT FOR THE METRO STREET NAME SIGNS AND HARDWARE, WHICH WILL BE FURNISHED BY THE CITY.

90%
SUBMITTAL
FOR FINAL DESIGN REVIEW

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RESPONSIBLE ENGINEER:
BROWN & GAY ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
J.T. AULDRIDGE, P.E.
TEXAS REGISTRATION NO. 98223
April 22, 2015

REV.	DESCRIPTION	BY	DATE

FORT WORTH CITY OF FORT WORTH, TEXAS
TRANSPORTATION & PUBLIC WORKS

NORTH BEACH STREET
NE LOOP 820 TO FOSSIL CREEK BOULEVARD

GENERAL CONSTRUCTION NOTES
SHEET 1 OF 4

Brown & Gay Engineers, Inc.
500 West 7th St., Suite 1800, Fort Worth, TX 76102
Tel: 817-887-6130 • www.browngay.com
TBPE Registration No. F-1046

DESIGNED: MLF/LNH	DATE	SCALE	PROJECT NO.	Sheet
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BROWN & GAY ENGINEERS, INC.
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NORTH BEACH STREET IMPROVEMENTS - NE LOOP 820 TO FOSSIL CREEK BOULEVARD
TPW: C210 531200 204230223830 WATER: PXXX-XXXXXXXXXXXX SEWER: PXXX-XXXXXXXXXXXX K-XXXXXX X-XXXXXX DOE # 7237

GENERAL CONSTRUCTION NOTES

1 CONTRACTOR SHALL BECOME FAMILIAR WITH THE TERMS AND CONDITIONS SET FORTH IN TEMPORARY CONSTRUCTION EASEMENTS. INGRESS AND EGRESS IS ALLOWED ON PRIVATE PROPERTY IN ORDER TO ACCESS TEMPORARY CONSTRUCTION EASEMENTS. IN THE AREAS WHERE NO CONSTRUCTION EASEMENTS ARE AVAILABLE, CONTRACTOR SHALL LIMIT ACTIVITIES TO WITHIN THE EXISTING UTILITY EASEMENT.

2 CONTRACTOR SHALL SUBMIT WRITTEN REQUEST TO THE ENGINEER FOR APPROVAL OF ALL AREAS TO BE USED FOR STAGING, MOBILIZATION, EQUIPMENT AND MATERIAL STORAGE AND GENERAL PROJECT CONSTRUCTION MANAGEMENT. REQUEST SHALL BE SUBMITTED TO THE ENGINEER WITHIN FIVE (5) DAYS OF NOTICE TO PROCEED.

3 CONTRACTOR SHALL CLEAN UP AND RESTORE THE AREA OF OPERATIONS TO A CONDITION AS GOOD AS OR BETTER THAN THAT WHICH EXISTED PRIOR TO THE PROJECT.

4 NO EQUIPMENT OR MATERIAL SHALL BE DEPOSITED ON PRIVATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE PROPERTY OWNERS. IF THE CONTRACTOR PLACES EXCESS MATERIAL IN THE WARE WITHOUT WRITTEN PERMISSION, HE WILL BE RESPONSIBLE FOR ALL DAMAGES RESULTING FROM SUCH FILL AND HE SHALL REMOVE THE MATERIALS AT HIS OWN COST, IF THE ENGINEER SO DIRECTS.

5 EXISTING UTILITY DATA IS PROVIDED FOR INFORMATION ONLY. ALTHOUGH THIS DATA IS SHOWN AS ACCURATELY AS POSSIBLE, THE CONTRACTOR IS CAUTIONED THAT THE CITY AND THE ENGINEER NEITHER ASSUMES NOR IMPLIES ANY RESPONSIBILITY FOR THE ACCURACY OF THIS DATA. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING UTILITY CROSSINGS SHOWN ON THE INCLUDED PROFILES ARE FROM RECORD DRAWINGS AND FROM INFORMATION OBTAINED FROM UTILITY COMPANIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD-VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF THESE UTILITIES.

6 THE CONTRACTOR SHALL REMOVE ALL FENCES, LOCATED WITHIN EASEMENTS, INTERFERING WITH CONSTRUCTION OPERATION AND PROVIDE TEMPORARY FENCING DURING CONSTRUCTION. REMOVED FENCES, WOODEN OR CHAIN LINK, SHALL BE REPLACED WITH A NEW FENCE OR UNDAMAGED ORIGINAL FENCING. ALL AFFECTED PROPERTY OWNERS SHALL BE NOTIFIED PRIOR TO CONSTRUCTION. REMOVAL AND REPLACEMENT OF EXISTING AND TEMPORARY FENCES SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED IN THE PROPOSAL.

7 CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GENERAL SAFETY AT AND ADJACENT TO THE PROJECT AREA INCLUDING THE PERSONAL SAFETY OF THE CONSTRUCTION CREW AND GENERAL PUBLIC AND THE SAFETY OF PUBLIC AND PRIVATE PROPERTY. CONTRACTOR SHALL PROVIDE TEMPORARY SANITARY SEWER FACILITIES TO AFFECTED PROPERTY OWNERS, IF NECESSARY. NOT A SEPARATE PAY ITEM.

8 CONTRACTOR SHALL PROTECT CONCRETE CURB AND GUTTER, DRIVEWAYS, AND SIDEWALKS THAT ARE NOT DESIGNATED FOR REMOVAL. REMOVAL AND REPLACEMENT OF THESE ITEMS SHALL BE AS DESIGNATED. AT LOCATIONS WHERE THE CURB AND GUTTER ARE TO BE REPLACED, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE RE-ESTABLISHMENT OF EXISTING STREET AND GUTTER GRADES. ESTABLISHMENT OF GRADES SHALL BE PERFORMED PRIOR TO CONSTRUCTION AND IS NOT A SEPARATE PAY ITEM, BUT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT PRICE.

9 THE CONTRACTOR SHALL REMOVE FROM THE PROJECT AREA ALL SURPLUS MATERIAL. THIS SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM. SURPLUS MATERIALS FROM EXCAVATION INCLUDING DIRT, TRASH, ETC. SHALL BE PROPERLY DISPOSED OF AT A SITE ACCEPTABLE TO THE CITY'S FLOOD PLAIN ADMINISTRATOR IF WITHIN THE CITY LIMITS. IF THE LOCATION IS NOT WITHIN THE CITY LIMITS, THE CONTRACTOR SHALL PROVIDE A LETTER STATING SO. NO EXCESS EXCAVATION MATERIAL SHALL BE DEPOSITED IN LOW AREAS OR ALONG NATURAL DRAINAGE WAY WITHOUT WRITTEN PERMISSION FROM THE AFFECTED PROPERTY OWNER AND THE CITY'S FLOOD PLAIN ADMINISTRATOR. IF THE CONTRACTOR PLACES EXCESS MATERIAL IN THE AREAS WITHOUT WRITTEN PERMISSION, HE WILL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM SUCH FILL AND HE SHALL REMOVE THE MATERIAL AT HIS OWN COST.

10 COSTS ASSOCIATED WITH PROPOSED CONNECTIONS TO EXISTING FACILITIES SHALL BE INCLUDED IN EACH RESPECTIVE BID ITEM. NO SEPARATE PAY, EXCEPT AS SPECIFICALLY INDICATED WITHIN THESE PLANS OR THE CONTRACT DOCUMENTS.

11 THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND SIDEWALKS ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS ARISING FROM THE CONSTRUCTION ACTIVITY.

12 CONTRACTOR SHALL CONTACT LOCAL SCHOOLS PRIOR TO BEGINNING CONSTRUCTION TO INFORM PRINCIPALS AND ADMINISTRATORS OF CONSTRUCTION IN THE AREA.

13 THE CONTRACTOR IS RESPONSIBLE FOR THE PREPARATION OF THE TRAFFIC MANAGEMENT PLAN. THE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER AND SUBMITTED FOR APPROVAL BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER. ALL BARRICADES, WARNING SIGNS, LIGHT DEVICES, AND ETC., FOR THE GUIDANCE AND PROTECTION OF TRAFFIC AND PEDESTRIANS MUST CONFORM TO THE INSTALLATION SHOWN IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION), TXDOT. ALL TRAFFIC CONTROL DEVICES SHALL BE INSPECTED DAILY.

14 EROSION CONTROL MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGEWAYS OR BORROW DITCHES AT RISK OF CONTRACTOR. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGEWAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION CONTROL MEASURES.

15 ALL VALVE BOXES AND MANHOLE LIDS SHALL BE SET TO MATCH FINISHED GRADE, UNLESS OTHERWISE NOTED.

16 THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS BEFORE CONSTRUCTION BEGINS.

17 THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT ELECTRIC POWER AND TELEPHONE POLES ARE NOT DISTURBED DURING CONSTRUCTION. ALL COSTS INCURRED FOR SUPPORTING ELECTRIC POWER AND TELEPHONE POLES SHALL BE INCLUDED IN THE PRICE BID FOR THE CONSTRUCTION OF THE PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

18 ALL STREETS WITHIN THE SCOPE OF THE CONTRACT SHALL BE KEPT ACCESSIBLE TO FIRE TRUCKS, AMBULANCES AND OTHER EMERGENCY VEHICLES.

19 MAINTAIN 9'CLEARANCE BETWEEN WATER AND SANITARY SEWER LINES.

20 CONTRACTOR SHALL MAINTAIN SUITABLE CONSTRUCTION ACCESS TO PRIVATE PROPERTY OWNERS, THE ENGINEER AND CITY OF FORT WORTH, AT ALL TIMES DURING CONSTRUCTION.

21 THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARING, IMPLEMENTATION AND MAINTENANCE OF THE SWPPP. THE INSPECTION AND MAINTENANCE OF THE EROSION PREVENTION MEASURES SHALL BE THE CONTRACTOR'S RESPONSIBILITY THROUGHOUT ALL PHASES OF CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH EPA'S NPDES REGULATIONS 40-CFR-122, 123, 124 CONCERNING EROSION AND SEDIMENT CONTROL. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A NOTICE OF INTENT "NOI" TO EPA 72 HOURS PRIOR TO BEGINNING CONSTRUCTION AND NOTICE OF TERMINATION "NOT" TO EPA UPON COMPLETION OF THE PROJECT.

22 IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN NEAT AND ACCURATE PLANS ON RECORD.

23 THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE SITE DRAINAGE THROUGHOUT THE DURATION OF THIS PROJECT.

24 THE CONTRACTOR SHALL AVOID DAMAGING ANY EXISTING WATER SPRINKLER SYSTEM THAT MAY BE IN THE CONSTRUCTION AREA AND WILL BE RESPONSIBLE FOR REPAIRS TO ANY HEADS OR LINES OF DAMAGED SYSTEMS. REPLACEMENT, AS NECESSARY, SHALL BE AT LIKE OR BETTER MATERIAL AND INSTALLED BY A LICENSED IRRIGATOR, AT THE CONTRACTORS EXPENSE. DAMAGED SPRINKLERS SHALL BE REPLACED THE SAME DAY THEY ARE DAMAGED, TO THE SATISFACTION OF THE CITY, DEVELOPER AND OWNER.

25 ALL DRIVEWAYS SHALL BE ACCESSIBLE AT ALL TIMES. ALL CLOSURES IN PART OR IN FULL SHALL BE COORDINATED WITH PROPERTY OWNER.

25 THE CONTRACTOR SHALL DISTRIBUTE LETTERS TO ALL AFFECTED PROPERTY OWNERS PRIOR TO BEGINNING WORK ON EACH PROPERTY. THIS LETTER SHALL INCLUDE NAMES AND TELEPHONE NUMBERS OF CONTRACTOR CONTACTS, A DESCRIPTION OF WORK TO BE DONE, AND THE TIME FRAME FOR DOING THE WORK. THE CONTRACTOR SHALL NOTIFY RESIDENTS 5 BUSINESS DAYS IN ADVANCE OF PERFORMING ANY WORK ON PRIVATE PROPERTY. DISTRIBUTION OF LETTERS SHALL BE CONSIDERED AN INCIDENTAL COST OF PROJECT.

26 UNLESS SPECIFICALLY STATED ON DRAWING, THE CONTRACTOR SHALL NOT REMOVE, CUT OR DAMAGE TREES OR LIMBS WITHOUT WRITTEN APPROVAL OF THE CITY OF FORT WORTH.

27 A LIMITED GEOTECHNICAL INVESTIGATION HAS BEEN PERFORMED ALONG THE PROJECT LIMITS. COPIES OF THE GEOTECHNICAL REPORT ARE AVAILABLE FROM THE CITY OF FORT WORTH. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE ACCURACY OF THIS INFORMATION AND MAKE ALL OTHER SUBSURFACE INVESTIGATIONS NECESSARY TO PERFORM THE WORK.

28 THE CONTRACTOR MAY ELECT TO VIDEO ALL POTENTIALLY IMPACTED PRIVATE PROPERTY AREAS PRIOR TO WORK. VIDEOS SHALL INCLUDE DATE NOTATION AND AUDIO IDENTIFICATION OF PROPERTY ADDRESS AND MAIN/LATERAL NAME. THIS PRE-CONSTRUCTION VIDEO TAPING OF IMPACTED PROPERTIES SHALL BE CONSIDERED SUBSIDIARY WORK.

WATER GENERAL CONSTRUCTION NOTES

1 WATER SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE "POLICY AND PROCEDURE FOR PROCESSING WATER AND SEWER DESIGN" DATED JUNE 1984, WITH THE LATEST REVISIONS, AS ESTABLISHED BY THE CITY OF FORT WORTH WATER DEPARTMENT FOR WATER AND SEWER PROJECTS.

2 EXISTING UTILITY DATA IS PROVIDED FOR INFORMATION ONLY. ALTHOUGH THIS DATA IS SHOWN AS ACCURATELY AS POSSIBLE, THE CONTRACTOR IS CAUTIONED THAT THE CITY AND THE ENGINEER NEITHER ASSUMES NOR IMPLIES ANY RESPONSIBILITY FOR THE ACCURACY OF THIS DATA.

3 CONTRACTOR IS TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

4 TRENCHES WHICH LIE OUTSIDE EXISTING PAVEMENTS SHALL BE BACKFILLED ABOVE THE TOP OF THE EMBEDMENT WITH IN-SITU BACKFILL MATERIAL WHEN IN-SITU BACKFILL MATERIAL IS NOT SUITABLE AND AT THE DIRECTION OF THE ENGINEER, IMPORTED MATERIAL SHALL BE USED. ALL BACKFILL MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 95% PROCTOR DENSITY BY MEANS OF TAMPING ONLY. TRENCHES, WHICH CROSS UNDER EXISTING PAVEMENT, SHALL BE BACKFILLED PER FORT WORTH STANDARDS AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT OF -2% TO +5% OF OPTIMUM MOISTURE CONTENT.

5 VALVES SHALL BE INSTALLED WHERE DESIGNATED ON PLANS.

6 FIRE HYDRANTS SHALL BE A MINIMUM OF 2'-6" BEHIND THE BACK OF CURB AND IN LINE WITH PROPERTY/LOT LINES EXCEPT WHERE SHOWN OTHERWISE IN THESE PLANS.

7 INSERT CLEANING PIG IN WATER MAIN WHERE DIRECTED. "CLEANING PIG" SHALL BE PROVIDED BY CONTRACTOR.

8 INSTALL CHLORINATION AND SAMPLING POINTS AT DESIGNATED LOCATIONS PER DETAIL 33 12 50-D122.

9 CORPORATION STOPS SHALL BE TESTED FOR FULL FLOW WHEN THE SYSTEM IS PRESSURE TESTED.

10 ALL EXISTING 3/4-INCH WATER SERVICE LINES SHALL BE REPLACED WITH 1-INCH TYPE K COPPER SERVICE LINES, WITH 1-INCH CORPORATION STOPS AND IF REQUIRED 1-INCH TAPPING SADDLE AND 1-INCH x 3/4-INCH REDUCER AT THE 3/4-INCH CURB STOP AS DIRECTED BY THE ENGINEER.

11 ALL EXISTING WATER METERS SHALL BE RELOCATED 3' BEHIND CURB OR AS DIRECTED BY THE ENGINEER.

12 CONTRACTOR SHALL INSTALL A 2" TEMPORARY WATER SERVICE MAIN.

13 CONTRACTOR SHALL SAW CUT EXISTING CURB AND GUTTER PAVEMENT, DRIVEWAYS AND SIDEWALKS IN AREAS WHERE PAVEMENT OR CONCRETE IS TO BE REMOVED. SAW CUTTING WILL BE CONSIDERED SUBSIDIARY TO THE PRICE PER LINEAR FOOT OF PIPE. CONTRACTOR SHALL PROVIDE COMPACTED SELECT MATERIAL AS NEEDED TO REPAIR DAMAGED DRIVES, STREETS, WALKS AND PATIOS.

14 ALL BARRICADES, WARNING SIGNS, LIGHT DEVICES, ETC. FOR THE GUIDANCE AND PROTECTION OF TRAFFIC AND PEDESTRIANS MUST CONFORM TO THE INSTALLATION SHOWN IN THE 1980 TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AS CURRENTLY AMENDED, TEXAS STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION.

15 HORIZONTAL BLOCKING FOR SMALL DIAMETER WATER LINES HAS BEEN OMITTED FOR CLARITY, HOWEVER BLOCKING SHALL BE CONSTRUCTED IN ACCORDANCE WITH 33 11 00-D130, 33 11 00-D131, AND 33 11 00-D132.

16 CONTRACTOR SHALL DECHLORINATE WATER USED FOR FLUSHING NEW PIPELINE TO CHLORINE PRIOR TO DISCHARGE TO STORM DRAIN PER TCEQ AND EPA REQUIREMENTS. WATER DISCHARGE WHILE DRAINING, TESTING, OR DISINFECTING PIPELINES SHALL BE DONE IN ACCORDANCE WITH TCEQ GENERAL PERMIT NO. TX670000.

17 ALL BURIED VALVES, FIRE HYDRANTS, METALLIC PIPING, AND METALLIC EQUIPMENT SHALL BE WRAPPED IN ACCORDANCE WITH THE SPECIFICATIONS.

18 THE CONTRACTOR SHALL NOT OPERATE WATER MAIN VALVES.

19 PI'S AND PVI'S ARE SHOWN IN THE PLANS FOR ALIGNMENT PURPOSES. CONTRACTOR SHALL USE STANDARD FITTINGS SHOWN ON THE PLAN AND DEFLECTED PIPE JOINTS, NO GREATER THAN 75% OF THE MANUFACTURERS RECOMMENDATIONS, TO ACHIEVE THE ALIGNMENT SHOWN IN THE PLANS.

20 THE CONTRACTOR SHALL DISINFECT THE NEW WATER MAINS IN ACCORDANCE WITH AWWA STANDARD C651 AND THEN FLUSH AND SAMPLE, AND PROVIDE A HARD COPY OF TEST RESULTS PRIOR TO TESTING THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATER LINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER. TEST MUST BE APPROVED BY THE CITY OF FORT WORTH BEFORE THE WATER LINE CAN BE PUT IN SERVICE. CONTRACTOR TO DECHLORINATE WATER USED FOR FLUSHING NEW WATER LINE TO 0.1 MG/L CHLORINE PRIOR TO DISCHARGE TO STORM DRAIN.

21 ALL NEWLY INSTALLED WATER PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.

22 CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY BY-PASS WATER SYSTEMS AS REQUIRED TO MAINTAIN FRESH, CLEAN, POTABLE WATER SUPPLY TO WATER SERVICE CUSTOMERS. ONLY MINIMAL SERVICE SHUTDOWNS WILL BE ALLOWED. CONTRACTOR SHALL NOTIFY THE OWNER AND ALL WATER SERVICE CUSTOMERS OF ANY TEMPORARY WATER SERVICE SHUTDOWNS. CONTRACTOR TO SUBMIT PLAN FOR CITY APPROVAL PRIOR TO INSTALLATION.

23 ALL PIPELINES INSTALLED FOR THIS PROJECT SHALL HAVE RESTRAINED JOINTS AT ALL TEES, BENDS, CROSSES, PLUGS, ETC. PER PROJECT SPECIFICATIONS, WHETHER SHOWN ON THE PLANS OR NOT.

SANITARY SEWER GENERAL CONSTRUCTION NOTES

1 ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF FORT WORTH WATER DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS, EXCEPT WHERE MODIFIED IN THESE PLANS OR IN THE SPECIAL CONDITIONS OF THE CONTRACT DOCUMENTS.

2 WHEN IT IS REQUIRED THAT A CONTRACTOR WORK IN PRIVATE PROPERTY, THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNER 48 HOURS PRIOR TO CONSTRUCTION. ONCE THE PIPE HAS BEEN INSTALLED OR REHABILITATED, THE CONTRACTOR SHALL IMMEDIATELY COMMENCE SURFACE RESTORATION. SURFACE RESTORATION MUST BE COMPLETED TO THE OWNER'S SATISFACTION WITHIN TEN (10) WORKING DAYS. FAILURE TO MAINTAIN SITE RESTORATION, AS NOTED ABOVE, MAY RESULT IN DEFERMENT OF FURTHER PIPE INSTALLATION ACTIVITIES.

3 THE PROPOSED SANITARY SEWER LINES AT TIMES WILL BE LAID CLOSE TO OTHER EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, GAS MAINS, TELEPHONE CABLES, SANITARY SEWER LINES, WATER LINES, TU CABLES, DRAINAGE PIPES, UTILITY SERVICES, AND ALL OTHER UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND DURING CONSTRUCTION. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES DONE TO SUCH EXISTING FACILITIES AS A RESULT OF THE CONTRACTOR'S OPERATIONS.

4 CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION TELEVISION INSPECTION OF ALL EXISTING SANITARY SEWER LINES, WHICH ARE TO BE ABANDONED OR REHABILITATED VIA TRENCHLESS METHODS, TO VERIFY LOCATIONS OF ALL SEWER SERVICE CONNECTIONS PRIOR TO CONSTRUCTION OF ENTIRE PROJECT.

5 CONTRACTOR SHALL ENSURE THAT ALL ACTIVE SERVICES CAN BE RECONNECTED AND/OR REROUTED TO NEW SEWER MAIN/LATERAL. CONTRACTOR SHALL NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS PRIOR TO CONSTRUCTION SO MODIFICATIONS TO THE PLANS CAN BE MADE IF NECESSARY. NOT A SEPARATE PAY ITEM, THIS WORK SHALL BE SUBSIDIARY TO PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER LINES.

6 CONTRACTOR SHALL SAWCUT EXISTING CURB AND GUTTER, PAVEMENT, DRIVEWAYS, AND SIDEWALKS AT AREAS WHERE PAVEMENT OR CONCRETE IS TO BE REMOVED. SAWCUTS WILL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR LINEAR FEET OF SANITARY SEWER.

7 CONTRACTOR SHALL BYPASS PUMP SEWAGE AROUND SECTIONS OF PIPE PRIOR TO BEING REPLACED OR REHABILITATED. NOT A SEPARATE PAY ITEM. PAYMENT SHALL BE INCIDENTAL TO REPLACEMENT OF SEWER.

8 NEW MANHOLES SHALL BE CONSTRUCTED SUCH THAT THE MANHOLE COVER IS AT FINISHED SURFACE GRADE, OR AS NOTED ON THE PLANS. CONCRETE COLLARS AND WATERTIGHT MANHOLE INSERTS SHALL BE PROVIDED WITH ALL NEW MANHOLES, AS REQUIRED FOR THIS PROJECT.

90% SUBMITTAL
FOR FINAL DESIGN REVIEW

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BROWN & GAY ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
J.T. AULDRIDGE, P.E.
TEXAS REGISTRATION NO. 98223
April 22, 2015

REV.	DESCRIPTION	BY	DATE

FORT WORTH — CITY OF FORT WORTH, TEXAS TRANSPORTATION & PUBLIC WORKS

NORTH BEACH STREET
NE LOOP 820 TO FOSSIL CREEK BOULEVARD

GENERAL CONSTRUCTION NOTES
SHEET 2 OF 4

Brown & Gay Engineers, Inc.
500 West 7th St., Suite 1800, Fort Worth, TX 76102
Tel: 817-887-6130 • www.browngay.com
TBPE Registration No. F-1046

DESIGNED: MLF/LNH DRAWN: MLF/LNH CHECKED: JTA	DATE	SCALE	PROJECT NO.	Sheet
	APRIL 2015	NTS	02238	5 of 179

BROWN & GAY ENGINEERS, INC.
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EROSION CONTROL

1. EROSION CONTROL MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGE WAYS OR BORROW DITCHES AT RISK OF CONTRACTOR. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGE WAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION CONTROL MEASURES.
2. ALL EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT SHALL BE PERFORMED AT THE EARLIEST DATE POSSIBLE BUT NOT LATER THAN 7 CALENDAR DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT.
3. DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED, TEMPORARILY OR PERMANENTLY, SHALL BE STABILIZED WITHIN 14 CALENDAR DAYS UNLESS THEY ARE SCHEDULED TO AND DO RESUME WITHIN 21 CALENDAR DAYS.
4. THE CONTRACTOR SHALL BE REQUIRED, ON A REGULAR BASIS OR AS MAY BE DIRECTED BY THE ENGINEER, TO DAMPEN HAUL ROADS FOR DUST CONTROL, STABILIZE CONSTRUCTION ENTRANCES AND TO REMOVE EXCESS DIRT FROM THE ROADWAY IMMEDIATELY.
5. DISPOSAL AREAS, STOCKPILES AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED.
6. CONSTRUCTION STAGING AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.
7. ALL WATERWAYS SHALL BE CLEARED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING, DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.
8. STABILIZATION SHALL BE PERFORMED FOR ALL DISTURBED NATURAL VEGETATION. IF WEATHER CONDITIONS ARE UNFAVORABLE FOR REVEGETATION, TEMPORARY STABILIZATION WILL BE ENSURED ON ALL AREAS.
9. AS THE SITE WORK IS COMPLETED, STABILIZATION SHALL BEGIN WITHIN 14 DAYS OF COMPLETION OF WORK IN THE AREA, OR AS SOON AS WEATHER CONDITIONS ALLOW. IF REVEGETATION IS NOT POSSIBLE, THEN TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED WITHIN 14 DAYS OF COMPLETION OF WORK. IF CONSTRUCTION ACTIVITIES TEMPORARILY CEASE ON AN AREA AND ARE NOT SCHEDULED TO BEGIN WORK IN THAT LOCATION FOR MORE THAN 21 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE PUT INTO PLACE. TEMPORARY STABILIZATION MAY BE ACHIEVED USING THE FOLLOWING BMPs: TEMPORARY SEEDING, SOIL RETENTION BLANKETS, FIBROUS MULCHES, HYDRO-MULCHES AND OTHER TECHNIQUES THAT COVER 100 PERCENT OF THE DISTURBED AREAS UNTIL FINAL STABILIZATION CAN BE ACHIEVED OR UNTIL FURTHER CONSTRUCTION ACTIVITIES TAKE PLACE.
10. FINAL STABILIZATION MEASURES MUST PROVIDE A PERENNIAL VEGETATIVE COVER WITH A UNIFORM DENSITY OF 70% OF THE NATIVE BACKGROUND VEGETATIVE COVER OR EQUIVALENT PERMANENT MEASURES (RIPRAP, GABION, GEOTEXTILES).
11. HYDRO-MULCH WILL NOT BE ALLOWED IN VEGETATED SWALES, CHANNELS, OR OTHER DRAINAGE WAYS.
12. TEMPORARY BMPs SHOULD BE REMOVED WITHIN 30 DAYS OF ESTABLISHING FINAL STABILIZATION.
13. EROSION CONTROL MEASURES SHALL FOLLOW THE STORM WATER POLLUTIONS PREVENTION PLAN (SWPPP) THAT IS KEPT ONSITE AT ALL TIMES WITH THESE CONSTRUCTION DOCUMENTS FOR COMPLIANCE WITH THE T.P.D.E.S. GENERAL PERMIT.
14. IN ORDER TO MINIMIZE EROSION CONTROL PROBLEMS, GENERAL CONTRACTOR SHALL COORDINATE WITH EXCAVATOR, LANDSCAPE, AND IRRIGATION CONTRACTORS TO DETERMINE EARLIEST POSSIBLE DATE TO INSTALL GRASSING AS NOTED ON THE LANDSCAPE PLAN.
15. THE STABILIZED CONSTRUCTION ENTRANCE HAS BEEN SHOWN ARBITRARILY. IT IS THE GENERAL CONTRACTOR'S CHOICE (IN COMPLIANCE WITH ALL CITY AND STATE REGULATIONS) TO DETERMINE THE LOCATION(S) OF PROJECT INGRESS/EGRESS POINTS. HOWEVER ALL ENTRANCES AT ALL TIMES SHALL BE PREPARED IN ACCORDANCE WITH THE STABILIZED CONSTRUCTION ENTRANCE DETAILS AND CONTINUOUSLY MAINTAINED UNTIL FINAL PAVING IS ESTABLISHED. CHANGES TO THIS EROSION CONTROL PLAN ARE TO BE LOGGED IN SWPPP.
16. STABILIZED LOPES (CURLEX BLANKET AND 70% COVER OF VEGETATION) ACHIEVING EROSION-FREE CONDITIONS MUST BE IN PLACE AND EFFECTIVE BY THE PROJECT "POSSESSION DATE".
17. THE EROSION CONTROL PLAN WILL INCORPORATE EROSION CONTROL MEASURES AND TECHNIQUES TO PREVENT SEDIMENTATION AND ERODED SOIL FROM LEAVING THE SITE EITHER IN EXISTING STORM DRAIN SYSTEM OR ONTO ADJACENT PRIVATE AND PUBLIC PROPERTY. CONSTRUCT TEMPORARY EROSION CONTROL SYSTEMS AS REQUIRED TO PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM EROSION AND SEDIMENTATION. CONTRACTOR SHALL NOTIFY CONSULTING ENGINEER AT ONCE IF SITE CONDITIONS WARRANT ADDITIONAL EROSION CONTROL MEASURES. CONTRACTOR IS RESPONSIBLE FOR TAKING IMMEDIATE ACTION TO REMEDY EROSION CONTROL WHILE CONSULTING ENGINEER IS PREPARING RESPONSE.
18. THE CONTRACTOR SHALL STABILIZE THE EARTHEN SLOPE AREAS IN ACCORDANCE WITH THE LANDSCAPE PLAN WITHIN 72 HOURS AFTER FINAL GRADE AND TOPSOIL HAS BEEN ESTABLISHED IN ACCORDANCE WITH THE PROJECT SITEWORK SPECS.
19. THE SPECIFIC PLANT MATERIALS PROPOSED TO PROTECT FILL AND EXCAVATED SLOPES SHALL BE AS INDICATED ON THE PLANS. PLANT MATERIALS MUST BE SUITABLE FOR USE UNDER LOCAL CLIMATE AND SOIL CONDITIONS. IN GENERAL, HYDRO SEEDING OR SODDING BERMUDA GRASS IS ACCEPTABLE DURING THE SUMMER MONTHS (MAY 1 TO AUGUST 30). WINTER RYE OR FESCUE GRASS MAY BE PLANTED DURING TIMES OTHER THAN THE SUMMER MONTHS AS A TEMPORARY MEASURE UNTIL SUCH TIME AS THE PERMANENT PLANTING CAN BE MADE.
20. PRIOR TO COMMENCING ANY CONSTRUCTION, A CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE SHALL BE INSTALLED A THE LOCATION(S) SHOWN.
21. AS INLETS ARE COMPLETED, TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED.
22. AT THE COMPLETION OF THE PAVING AND FINAL GRADING, THE DISTURBED AREA(S) SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS.
23. SILT FENCE AND INLET SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL REVEGETATION HAS BEEN COMPLETED.
24. DISTURBED AREAS THAT ARE SEEDED OR SODDED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED AND RESEEDED OR RESODDED, IF NECESSARY.
25. ALL EROSION CONTROL MEASURES TO BE PLACED BASED ON CONTRACTOR'S BEST JUDGMENT AND CONSTRUCTION PHASING TO MINIMIZE SILT RUNOFF TO THE MAXIMUM EXTENT PRACTICABLE.
26. TEMPORARY INLET PROTECTION TO BE REMOVED OR ADDED BASED ON EXISTING STORM SEWER REMOVAL AND/OR PROPOSED STORM SEWER CONSTRUCTION. FUNCTIONING INLETS SHALL BE INLET PROTECTED AT ALL TIMES. (USE PIPE INLET PROTECTION IF NEEDED)
27. SHOWN CONSTRUCTION ENTRANCES TO BE PLACED, MODIFIED ON THIS PLAN AND LOGGED IN THE SWPPP BASED ON CONSTRUCTION MANAGER'S ON-SITE DECISIONS TO CONTROL EROSION TO THE MAXIMUM EXTENT PRACTICABLE. CONSTRUCTION ENTRANCES TO BE PLACED BASED ON CONSTRUCTION PHASING.
28. CONTRACTOR SHALL DESIGN AND CONSTRUCT THE WASH-OUT PIT AND CONTAINMENT BASIN IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN FOR THE PROJECT AND SUBMIT PROPOSED LOCATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING ANY CONSTRUCTION.

EROSION CONTROL

1. ALL PROCEDURES AND MATERIAL USED FOR EROSION CONTROL SHALL BE APPROVED BY THE CITY OF FORT WORTH.
2. THE LOCATION OF EROSION CONTROL DEVICES SHALL BE AS SHOWN IN THE PLANS. ADDITIONAL EROSION CONTROL DEVICES AND/OR ADJUSTMENT OF LOCATIONS FOR EROSION CONTROL MAY OCCUR IF IN THE OPINION OF THE CITY INSPECTOR THE MEASURES TAKEN IN ACCORDANCE WITH THIS PLAN ARE INADEQUATE.
3. SILT FENCES SHALL BE MIRAFI 100X OR APPROVED EQUAL AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
4. HAY BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
5. HAY BALES SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES.
6. HAY BALES SHALL BE SECURELY ANCHORED IN PLACE BY 2" x 2" STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
7. HAY BALE STAKES SHALL BE A MINIMUM OF 24" LONG AND SHALL BE DRIVEN SUFFICIENTLY TO MAKE THE ENDS FLUSH WITH TOP OF BALES.
8. THE CONTRACTOR SHALL REMOVE AND REPLACE EROSION CONTROL AS NEEDED FOR CONSTRUCTION OR ACCESS. ALL EROSION CONTROL MUST BE IN PLACE AT THE END OF EACH DAY.
9. ALL PERIMETER PROTECTION SHALL BE INSTALLED PRIOR TO EXTENSIVE ON SITE GRADING.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO USE WHATEVER MEANS ARE NECESSARY TO CONTROL AND LIMIT SILT AND SEDIMENT LEAVING THE SITE. SPECIFICALLY, THE CONTRACTOR SHALL PROTECT ALL PUBLIC STREETS, ALLEYS, STREAMS, STORM DRAIN SYSTEMS AND INLETS FROM EROSION DEPOSITS.
11. ALL EROSION CONTROL DEVICES TO BE INSPECTED, CLEANED AND/OR REPLACED AFTER EACH STORM.
12. USE OF ON-SITE FUEL STORAGE TANKS IS DISCOURAGED. HOWEVER, IF USED, THE PREVENTION OF HAZARDS TO THE GROUND WATER IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR UTILIZING SAID STORAGE. SEE N.C.T.C.O.G. CONSTRUCTION BMP MANUAL SECTION 4 HAZARDOUS WASTE MANAGEMENT.
13. A CENTRALIZED PIT/WASH BASIN SHALL BE CONSTRUCTED ON-SITE FOR THE PURPOSE OF CONCRETE TRUCK WASHING. SEE N.C.T.C.O.G. CONSTRUCTION BMP MANUAL SECTION 4 CONCRETE WASTE MANAGEMENT.
14. "SEDIMENT BARRIER" INDICATES SILT FENCE OR HAY BALE CHECK DAM (OR A COMBINATION OF THE TWO), AS SELECTED BY THE CONTRACTOR AND APPROVED BY THE CONSULTANT ENGINEER.
15. CONTRACTORS SHALL PARK, STORE EQUIPMENT AND MATERIALS, AND SERVICE VEHICLES AT THE "PARKING AND STORAGE AREA". THE LOCATION OF SAID AREA IS TO BE APPROVED BY THE OWNER OR HIS REPRESENTATIVE.
16. CONSTRUCTION ENTRANCES ARE TO BE INSTALLED AT ALL POINTS WHERE EQUIPMENT ENTERS OR LEAVES THE SITE. THE LOCATION OF SAME IS TO BE APPROVED BY THE OWNER OR HIS REPRESENTATIVE
17. AREAS WHERE FINAL GRADE HAS BEEN ACHIEVED SHOULD RECEIVE PERMANENT SEEDING WITHIN 14 DAYS.
18. EROSION CONTROLS TO REMAIN IN PLACE AND TO BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.
19. EROSION CONTROL MEASURES MAY ONLY BE PLACED IN FRONT OF INLET OR IN CHANNELS, DRAINAGEWAYS OR BORROW DITCHES AT RISK OF CONTRACTOR. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY MEASURES, INCLUDING FLOODING DAMAGE WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGEWAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION CONTROL MEASURES.

SLOPE PROTECTION

1. TEMPORARY BERMS AND/OR SWALES SHALL BE PROVIDED TO DIRECT STORM WATER AWAY FROM THE SLOPE UNTIL THE SLOPE IS STABILIZED.
2. TEMPORARY TERRACES SHALL BE PROVIDED AT REGULAR INTERVALS TO BREAK UP SLOPES LONG THAN 50 FEET UNTIL THE SLOPE IS STABILIZED.
3. FINAL STABILIZATION MEASURES SHALL BE INITIATED WITHIN 12 DAYS OF COMPLETING WORK ON THE SLOPE.
4. SOIL RETENTION BLANKET SHALL BE PROVIDED ON ALL SLOPES STEEPER THAN ONE VERTICAL ON FIVE HORIZONTAL (5H:1V).

INSPECTION AND MAINTENANCE

1. INSPECTIONS SHALL BE PERFORMED ON CONSTRUCTION AREAS ONCE EVERY 14 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.5 INCHES OR GREATER, (OR ONCE EVERY 7 DAYS REGARDLESS OF RAINFALL) TO ENSURE THAT ALL OF THE SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATING CORRECTLY. AREAS TO INSPECT INCLUDE BUT ARE NOT LIMITED TO:
   - DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED.
   - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
   - DISCHARGE POINTS FOR VISIBLE SIGNS OF EROSION AND IMPACT TO RECEIVING WATERS.
2. EROSION, SEDIMENT, AND MATERIAL AND WASTE CONTROLS SHALL BE REPAIRED, REPLACED, MODIFIED AND/OR ADDED IF INSPECTIONS REVEAL THE CONTROLS WERE NOT INSTALLED CORRECTLY, ARE DAMAGED OR ARE INADEQUATE OR INEFFECTIVE IN CONTROLLING THEIR TARGETED POLLUTANT.
3. SEDIMENT SHALL BE REMOVED FROM BMP'S WHEN THE SEDIMENT REACHES HALF OF THE BMP'S CAPACITY OR MORE FREQUENTLY. SEDIMENT DISCHARGED FROM THE SITE SHALL BE REMOVED PRIOR TO THE NEXT RAIN EVENT, WHERE FEASIBLE, AND IN NO CASE LATER THAN SEVEN DAYS AFTER IT IS DISCOVERED. UPON COMPLETION OF CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM ALL STORM DRAIN INFRASTRUCTURE AND PERMANENT BMPs BEFORE THE TEMPORARY BMPs ARE REMOVED FROM THE SITE.

MATERIALS AND WASTES

1. SANITARY FACILITIES SHALL BE PROVIDED ON THE SITE AT A LOCATION APPROVED BY THE CITY. THE FACILITIES SHALL BE REGULARLY SERVICED AT THE FREQUENCY RECOMMENDED BY THE SUPPLIER FOR THE NUMBER OF PEOPLE USING THE FACILITY.
2. STORE ALL TRASH AND DEBRIS IN COVERED BINS OR OTHER ENCLOSURES. TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AT REGULAR INTERVALS. CONTAINERS SHALL NOT BE ALLOWED TO OVERFLOW.
3. THE AMOUNT OF CHEMICALS AND HAZARDOUS MATERIALS STORED ON-SITE SHALL BE MINIMIZED AND LIMITED TO THE MATERIALS NECESSARY FOR THE CURRENT PHASE OF CONSTRUCTION. CHEMICALS AND HAZARDOUS MATERIALS SHALL BE STORED IN THEIR ORIGINAL, MANUFACTURER'S CONTAINERS INSIDE OF A SHELTER THAT PREVENTS CONTACT WITH RAINFALL AND RUNOFF. HAZARDOUS MATERIAL STORAGE SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS. STORAGE LOCATIONS SHALL HAVE APPROPRIATE PLACARDS AND SECONDARY CONTAINMENT EQUIVALENT TO 110% OF THE LARGEST CONTAINER IN STORAGE. IF AN EARTHEN PIT OR BERM IS USED FOR SECONDARY CONTAINMENT, IT SHALL BE LINED WITH PLASTIC. CONTAINERS SHALL BE KEPT CLOSED EXCEPT WHEN MATERIALS ARE ADDED OR REMOVED. MATERIALS SHALL BE DISPENSED USING DRIP PANS OR WITHIN A HED, BERMED AREA OR USING OTHER SPILL/OVERFLOW PROTECTION MEASURES.
4. ON-SITE FUEL TANKS SHALL BE PROVIDED WITH A SECONDARY ENCLOSURE EQUIVALENT TO 110% OF THE TANK'S VOLUME. IF THE ENCLOSURE IS AN EARTHEN PIT OR BERM, THE AREA SHALL BE LINED WITH PLASTIC. THE LOCATION OF FUEL TANKS AND THEIR SECONDARY CONTAINMENT SHALL BE APPROVED BY THE CITY.
5. A DESIGNATED AREA FOR CONCRETE WASH-OUT SHALL BE PROVIDED. A PIT OR BERMED AREA, LINED WITH PLASTIC, OR AN EQUIVALENT CONTAINMENT MEASURE SHALL BE PROVIDED FOR CONCRETE WASH-OUT WATER. THE CONTAINMENT SHALL BE A MINIMUM OF 6 CF FOR EVERY 10 CY OF CONCRETE PLACED PLUS A LONE FOOT FREEBOARD. THE DISCHARGE OF WASH-OUT WATER TO DRAINAGE WAYS OR STORM DRAIN INFRASTRUCTURE SHALL BE PROHIBITED.
6. HYPER-CHLORINATED WATER SHALL NOT BE DISCHARGED TO THE ENVIRONMENT UNLESS THE CHLORINE CONCENTRATION IS REDUCED TO 4 PPM OR LESS BY CHEMICALLY TREATING TO DECHLORINATE OR BY ON-SITE RETENTION UNTIL NATURAL ATTENUATION OCCURS. NATURAL ATTENUATION MAY BE AIDED BY AERATION. WATER WITH MEASURABLE CHLORINE CONCENTRATION OF LESS THAN 4 PPM IS PROHIBITED FROM BEING DISCHARGED ONTO VEGETATION OR THROUGH A CONVEYANCE SYSTEM FOR FURTHER ATTENUATION OF THE CHLORINE BEFORE IT REACHES SURFACE WATER. ALTERNATIVELY, PERMISSION FROM THE SANITARY SEWER OPERATOR MAY BE OBTAINED TO DISCHARGE DIRECTLY INTO THE SANITARY SEWER.
7. VEHICLE AND EQUIPMENT WASHING IS PROHIBITED ON THE SITE UNLESS A LINED BASIN IS PROVIDED TO CAPTURE 100% OF THE WASH WATER. THE WASH WATER MAY BE ALLOWED TO EVAPORATE OR HAULED-OFF FOR DISPOSAL.
8. LIME OR OTHER CHEMICAL STABILIZERS SHALL BE LIMITED TO THE AMOUNT THAT CAN BE MIXED AND COMPACTED BY THE END OF EACH WORKING DAY. STABILIZERS SHALL BE APPLIED AT RATES THAT RESULT IN NO RUNOFF. STABILIZATION SHALL NOT OCCUR IMMEDIATELY BEFORE AND DURING RAINFALL EVENTS. SOIL STABILIZERS STORED ON-SITE SHALL BE CONSIDERED A HAZARDOUS MATERIAL AND SHALL MEET ALL THE REQUIREMENTS FOR CHEMICALS AND HAZARDOUS MATERIALS.
9. SLURRY FROM CONCRETE CUTTING SHALL BE VACUUMED OR OTHERWISE RECOVERED AND NOT BE ALLOWED TO DISCHARGE FROM THE SITE. IF THE PAVEMENT TO BE CUT IS NEAR A STORM DRAIN INLET, THE INLET SHALL BE PROTECTED BY SANDBAGS OR EQUIVALENT TEMPORARY MEASURES TO PREVENT THE SLURRY FORM ENTERING THE INLET.

TRAFFIC CONTROL WITHIN TXDOT RIGHT-OF-WAY

THE CONTRACTOR IS RESPONSIBLE FOR PREPARING, IMPLEMENTING, AND MAINTAINING A TRAFFIC MANAGEMENT PLAN ACCORDING TO SPECIFICATION SECTION 34 71 13 FOR THIS PROJECT. THE FOLLOWING TRAFFIC CONTROL NARRATIVE HAS BEEN DEVELOPED AS A GUIDE FOR CONSTRUCTION WITHIN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) RIGHT-OF-WAY, NORTH BEACH STREET AT NORTHEAST LOOP NO. 820.

CONSTRUCTION OF IMPROVEMENTS AT NORTHEAST LOOP NO. 820 EASTBOUND FRONTAGE ROAD (EBFR)

PHASE 1A – CONSTRUCT SOUTH SIDE OF INTERSECTION.
1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL INSTALL ADVANCE WARNING SIGNS ACCORDING TO TXDOT STANDARD DETAILS LISTED BELOW.
2. CLOSE RIGHT LANE OF EBFR USING TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 35 MPH.
3. CLOSE OUTSIDE LEFT TURN LANE ON SOUTHBOUND (SB) N. BEACH STREET USING STANDARD DETAIL TCP (1-5)-12 FOR 40 MPH.
4. CLOSE LEFT LANE ON NORTHBOUND (NB) N. BEACH STREET USING TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 40 MPH.
5. RECONSTRUCT MEDIAN NOSE AT SOUTH SIDE OF INTERSECTION.
6. CONSTRUCT PROPOSED CUT-THROUGH RAMP IN REFUGE ISLAND AT THE SOUTHEAST CORNER OF THE INTERSECTION.
7. CONSTRUCT PROPOSED PEDESTRIAN RAMP AT SOUTHEAST CORNER OF INTERSECTION.

PHASE 1B – CONSTRUCT NORTH CENTER MEDIAN NOSE.
1. ADJUST ADVANCE WARNING SIGNS AS NEEDED.
2. OPEN RIGHT LANE OF EBFR AND OUTSIDE LEFT TURN LANE ON SB N. BEACH STREET. LEFT LANE ON NB N. BEACH STREET SHALL REMAIN CLOSED.
3. CLOSE INSIDE LEFT TURN LANE OF EBFR USING TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 35 MPH.
4. CLOSE INSIDE LEFT TURN LANE ON SB N. BEACH STREET USING TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 40 MPH.
5. RECONSTRUCT MEDIAN NOSE AT NORTH SIDE OF INTERSECTION.
6. OPEN ALL LANES.

PHASE 1C – CONSTRUCT NORTHEAST PEDESTRIAN RAMP.
1. ADJUST ADVANCE WARNING SIGNS AS NEEDED.
2. CLOSE LEFT THRU LANE ON EBFR ACCORDING TO DETAIL TCP (1-5)-12 FOR 35 MPH.
3. CONSTRUCT PROPOSED PEDESTRIAN RAMP AT NORTHEAST CORNER OF INTERSECTION.
4. OPEN ALL LANES.

CONSTRUCTION OF IMPROVEMENTS AT NORTHEAST LOOP NO. 820 WESTBOUND FRONTAGE ROAD (WBFR)

PHASE 2A – RECONSTRUCT SOUTH CENTER MEDIAN NOSE.
1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL INSTALL ADVANCE WARNING SIGNS ACCORDING TO TXDOT STANDARD DETAILS LISTED BELOW.
2. CLOSE INSIDE LEFT TURN LANE ON NB N. BEACH STREET USING TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 40 MPH.
3. CLOSE LEFT LANE OF SB N. BEACH STREET ACCORDING TO TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 40 MPH.
4. CLOSE WBFR LEFT TURN LANE ACCORDING TO TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 35 MPH. (ALLOW LEFT TURN FROM MIDDLE LANE.)
5. RECONSTRUCT MEDIAN NOSE ON SOUTH SIDE OF INTERSECTION.

PHASE 2B – CONSTRUCT SOUTHEAST PEDESTRIAN RAMP.
1. ADJUST ADVANCE WARNING SIGNS AS NEEDED.
2. OPEN INSIDE LEFT TURN LANE ON NB N. BEACH STREET AND LEFT LANE OF SB N. BEACH STREET. WBFR LEFT TURN LANE SHALL REMAIN CLOSED.
3. CONSTRUCT PROPOSED PEDESTRIAN RAMP IN MEDIAN AT SOUTHEAST CORNER OF INTERSECTION.
4. OPEN ALL LANES.

PHASE 2C – RECONSTRUCT NORTH CENTER MEDIAN.
1. ADJUST ADVANCE WARNING SIGNS AS NEEDED.
2. CLOSE RIGHT THRU LANE ON WBFR ACCORDING TO TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 35 MPH.
3. SHIFT TRAFFIC ACCORDING TO CONTRACTOR-DEVELOPED, CITY-APPROVED TRAFFIC CONTROL PLAN AND RECONSTRUCT CENTER MEDIAN AT NORTH SIDE OF INTERSECTION.
4. OPEN ALL LANES.

PHASE 2D – CONSTRUCT NORTHEAST PEDESTRIAN RAMP.
1. ADJUST ADVANCE WARNING SIGNS AS NEEDED.
2. CLOSE RIGHT THRU LANE ON NB N. BEACH STREET ACCORDING TO TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 40 MPH.
3. CLOSE RIGHT TURN LANE AND RIGHT THRU LANE ON WBFR ACCORDING TO TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 35 MPH.
4. CONSTRUCT PROPOSED REFUGE ISLAND AT NORTHEAST CORNER OF INTERSECTION.
5. CONSTRUCT PROPOSED PEDESTRIAN RAMP AT NORTHEAST CORNER OF INTERSECTION.

PHASE 2E – CONSTRUCT NORTHWEST PEDESTRIAN RAMP.
1. ADJUST ADVANCE WARNING SIGNS AS NEEDED.
2. CLOSE RIGHT THRU LANE ON SB N. BEACH STREET ACCORDING TO TXDOT STANDARD DETAIL TCP (1-5)-12 FOR 40 MPH.
3. CONSTRUCT PROPOSED CUT-THROUGH RAMP IN REFUGE ISLAND AT NORTHWEST CORNER OF INTERSECTION.

90% SUBMITTAL
FOR FINAL DESIGN REVIEW

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BROWN & GAY ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
J.T. AULDRIDGE, P.E.
TEXAS REGISTRATION NO. 98223
April 22, 2015

REV.	DESCRIPTION	BY	DATE

FORT WORTH — CITY OF FORT WORTH, TEXAS TRANSPORTATION & PUBLIC WORKS

NORTH BEACH STREET
NE LOOP 820 TO FOSSIL CREEK BOULEVARD

GENERAL CONSTRUCTION NOTES
SHEET 3 OF 4

BGE
Brown & Gay Engineers, Inc.
500 West 7th St., Suite 1800, Fort Worth, TX 76102
Tel: 817-887-6130 • www.browngay.com
TBPE Registration No. F-1046

DESIGNED: JTA	DATE	SCALE	PROJECT NO.	Sheet
DRAWN: BGE	APRIL 2015	NTS	02238	6 of 179
CHECKED: CJK				

DOE # 7237 K-XXXXXX X-XXXXXX SEWER: PXXX-XXXXXXXXXXXX WATER: PXXX-XXXXXXXXXXXX TPW: C210 531200 204230223830 NORTH BEACH STREET IMPROVEMENTS – NE LOOP 820 TO FOSSIL CREEK BOULEVARD

BROWN & GAY ENGINEERS, INC.

TRAFFIC SIGNALS

1. EACH SIGNAL INSTALLATION CONSISTS OF THE FOLLOWING PRINCIPAL ITEMS:

   1.1. INSTALLING CONTROLLER CABINET, ANCHOR BOLTS, SIGNAL POLES, MAST ARMS, ALL SIGNAL SIGNS, SIGN POSTS, STREET LIGHT ARMS AND STREET LIGHT HEADS AND ELECTRICAL PEDESTAL SERVICE IF SHOWN ON PLANS.

   1.2. FURNISHING AND INSTALLING SIGNAL HEADS, PEDESTRIAN HEADS, PEDESTRIAN BUTTONS WITH INTEGRAL SIGNS CONDUIT, GROUND BOXES, DETECTOR LOOPS, SIGNAL CABLE, GROUND RODS AND MAST ARM STABILIZERS WITH MOUNTING HARDWARE.

   1.3. FURNISHING AND PLACING ALL CONCRETE AND REINFORCING STEEL FOR THE SIGNAL POLE FOUNDATIONS AND CABINET FOUNDATIONS AND GROUND BOX APRONS.

   1.4. FURNISHING AND INSTALLING ANY OTHER ITEMS NOT LISTED ABOVE WHICH ARE NEEDED TO PROVIDE A COMPLETE TRAFFIC SIGNAL WITH VEHICLE DETECTION (LOOP DETECTORS OR VIVDS OR MICROLOOP PROBES) AS CALLED FOR IN THE PLANS AND SPECIFICATIONS.

2. THE CONTRACTOR SHALL NOTIFY TRAFFIC SERVICES DIVISION (817-392-7738).

3. EQUIPMENT SUPPLIED BY THE CITY WILL BE AVAILABLE FOR PICK UP FROM THE TRANSPORTATION/PUBLIC WORKS (T/PW) WAREHOUSE AT 5001 JAMES AVENUE AND/OR THE BRENNAN SERVICE CENTER AT 2500 BRENNAN AVE. 76106. THE PROJECT INSPECTOR MUST AUTHORIZE ALL EQUIPMENT PICKUPS.

4. CONTRACTOR WILL ONLY BE ALLOWED TO WORK FROM 9:00 A.M. TO 4:00 P.M. UNLESS OTHERWISE AUTHORIZED BY ENGINEER.

5. EXISTING SIGNAL EQUIPMENT SHALL REMAIN IN PLACE AND OPERATING UNTIL NEW EQUIPMENT IS IN PLACE AND READY TO OPERATE.

6. EXISTING STOP SIGNS AND POSTS WILL BE REMOVED BY CITY FORCES AT OR BEFORE THE SIGNAL TURN-ON.

7. UNLESS DIRECTED BY THE ENGINEER, SIGNALS SHALL BE PLACED IN FULL OPERATION BETWEEN 9:00 A.M. AND 12:00 P.M. (NOON) ON MONDAY THROUGH THURSDAY ONLY. A REPRESENTATIVE FROM THE TRAFFIC SERVICES DIVISION SHALL BE PRESENT WHEN THE SIGNAL IS PLACED IN OPERATION. THE CONTRACTOR SHALL CONTACT TRAFFIC SERVICES DIVISION (817-392-7738) TO ARRANGE TIME AND DATE OF SIGNAL TURN-ON.

8. TEST PERIOD FOR SIGNALS: ONCE THE PERMANENT SIGNALS HAVE BEEN INSTALLED AND PLACED IN OPERATION, THEY SHALL OPERATION CONTINUOUSLY FOR A MINIMUM OF 30 CALENDAR DAYS IN A SATISFACTORY MANNER. DURING THE TEST PERIOD, THE CONTRACTOR SHALL REPAIR ANY MALFUNCTIONS TO EQUIPMENT HE SUPPLIED ON THE PROJECT. ANY FAILURES DURING THE 30 DAYS WILL CASE THE TEST PERIOD TO START OVER.

FOUNDATIONS

1. DIMENSIONS SHOWN ON PLANS FOR LOCATIONS OF SIGNAL FOUNDATIONS, CONDUIT, AND OTHER ITEMS MAY BE VARIED TO MEET LOCAL CONDITIONS, SUBJECT TO APPROVAL OF ENGINEER.

2. CONTRACTOR SHALL CONTACT THE CITY PRIOR TO POURING CABINET FOUNDATION TO BE SURE THAT TEMPLATES AND BOLT PATTERNS ARE CORRECT FOR TYPE OF CABINET BEING SUPPLIED. THE CITY WILL SUPPLY CABINET FOUNDATION ANCHOR BOLTS.

3. NO SIGNAL POLES SHALL BE PLACED ON FOUNDATIONS PRIOR TO SEVEN DAYS FOLLOWING POURING OF CONCRETE.

4. CONTRACTOR SHALL CLEAN UP AND REMOVE FROM WORK AREA ALL LOOSE MATERIAL RESULTING FROM CONSTRUCTION OPERATIONS EACH DAY BEFORE WORK IS SUSPENDED.

5. CONTROLLER CABINET FOUNDATION AND APRON SHALL BE CLASS "A" CONCRETE.

6. CONTROLLER CABINET CONCRETE APRON SHALL BE SUBSIDIARY TO THE BID ITEM FOR THE CONTROLLER CABINET FOUNDATION.

CONTROLLER AND CABINET

1. CONTRACTOR SHALL INSTALL CONTROLLER CABINET AND CONNECT ALL FIELD WIRES.

2. CITY WILL INSTALL SIGNAL TIMING AND PROGRAM CONTROLLER, CONFLICT MONITOR, AND MODEM.

CONDUIT

1. RIGID METAL CONDUIT (2") SHALL BE USED FOR CONDUIT ATTACHED TO WOOD POLES AS NOTED ON PLANS.

2. A CONTINUOUS GROUNDED SYSTEM SHALL BE PROVIDED IN PVC CONDUIT BY RUNNING 1-#8 BARE COPPER WIRE IN CONDUIT BETWEEN FOUNDATIONS AND GROUNDING AT EACH FOUNDATION GROUND ROD.

3. IF IT IS DETERMINED THAT IT IS IMPRACTICAL TO PLACE CONDUIT BY BORING ACROSS A STREET OR ROADWAY, OPEN TRENCH METHOD MAY BE USED (WITH THE AUTHORIZATION OF THE ENGINEER) AT NO ADDITIONAL COST TO THE CITY. IN THE EVENT THAT OPEN TRENCH METHOD IS USED, THE TRENCH SHALL BE RECONSTRUCTED AS SHOWN IN THE CITY OF FORT WORTH STANDARD SPECIFICATIONS FOR STREET AND STORM DRAIN CONSTRUCTION FOR TRENCH REPAIR OF THE VARIOUS PAVEMENT TYPES.

SIGNAL HEADS

1. ALL SIGNAL HEADS SHALL BE COVERED WITH APPROVED MATERIAL FROM THE TIME OF INSTALLATION UNTIL THE SIGNAL IS PLACED IN OPERATION.

2. ALL SIGNAL ATTACHMENTS SHALL BE DESIGNED SUCH THAT THE WIRING TO EACH SIGNAL HEAD SHALL PASS FROM THE MAST ARM THROUGH A RAIN TIGHT CONNECTOR (CRUSE HINDS, STRAIGHT BODY MALE THREAD, PART NO. CGB297 OR APPROVED EQUAL) TO THE SIGNAL HEAD BRACING OR ATTACHMENT HARDWARE TO THE SIGNAL HEAD. A SMALL AMOUNT OF EXPOSED WIRING SHALL FORM A DRIP LOOP.

3. CONTRACTOR SHALL SUPPLY ALL SIGNAL AND PEDESTRIAN HEAD MOUNTING HARDWARE. CLAIM-SHELL MOUNTING ASSEMBLIES SHALL BE USED FOR PEDESTRIAN INDICATIONS.

4. SIGNAL HEADS (ALL DISPLAYS) AND PEDESTRIAN WALK AND DON'T WALK HEADS SHALL HAVE L.E.D. INSERTS SUPPLIED BY THE CONTRACTOR. ALL L.E.D. SIGNAL INDICATIONS SHALL MEET THE LATEST ITE STANDARDS AND SHALL BE GE LUMINATION. ALL L.E.D. SIGNALS SHALL BE OF THE INCANDESCENT APPEARANCE. ALL GREEN L.E.D. SIGNALS SHALL HAVE A CLEAR LENS.

WAVETRONIX SMARTSENSOR™ ADVANCE SYSTEM

1. THE CITY WILL FURNISH WAVETRONIX SMART SENSOR™. ADVANCE EQUIPMENT AND CABLE UNLESS NOTED OTHERWISE ON THE PLANS.

2. THE CONTRACTOR SHALL INSTALL THE WAVETRONIX SMART SENSOR™. ADVANCE UNIT AS SHOWN ON THE PLANS AND RUN ONE CONTINUOUS CABLE FROM EACH UNIT TO THE CABINET.

TRAFFIC SIGNS AND PAVEMENT MARKINGS

1. ALL TRAFFIC SIGNS, THEIR POSTS WITH BREAKAWAY DESIGN BASE SHOWN ON THE PLANS WILL BE FURNISHED BY THE CITY UNLESS NOTED OTHERWISE ON THE PLANS.

2. ALL POLE AND MASTARM MOUNTED SIGNS SHALL BE INSTALLED BY THE CONTRACTOR. CITY WILL FURNISH MOUNTING HARDWARE FOR METRO SIGNS ONLY.

3. ALL PAVEMENT MARKINGS WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE ON THE PLANS.

4. WHEN SHOWN ON PLANS THE PEDESTRIAN SIGN AND PUSH BUTTON ASSEMBLY SHALL BE EQUAL TO PELCO NUMBER SE-2011-08 AND THE SIGN DESIGNATED R10-4B SHALL BE PELCO NUMBER SF-1019-5 OR EQUAL THE PUSH BUTTON SHALL BE EQUAL TO POLARA ENGINEERING INC. PART NUMBER BDLM2-Y.

VEHICLE DETECTORS/VIVDS

1. VEHICLE DETECTOR LOOPS SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERSECTION LAYOUTS IN THESE PLANS OR AS DIRECTED BY THE ENGINEER.

2. LOOP DETECTOR LEAD-IN CABLES SHALL BE RUN CONTINUOUSLY WITHOUT SPLICES FROM THE CURBSIDE PULL BOX TO THE CONTROLLER.

3. EACH LOOP DETECTOR LEAD-IN CABLE SHALL BE TAGGED INSIDE THE CONTROLLER CABINET WITH LOOP NOTATION AS SHOWN ON THE INTERSECTION LAYOUT.

4. DO NOT RUN LOOP DETECTOR WIRES OR LOOP LEAD-IN WIRES ACROSS EXPANSION JOINTS OR ACROSS A JOINT OF TWO DIFFERENT PAVEMENT TYPES.

5. VIVDS: THE CONTRACTOR SHALL INSTALL, AIM AND PROGRAM ALL VIDEO DETECTORS (INCLUDING VIDEO CABLE) AS SOWN ON THE PLANS.

6. FURNISH AND INSTALL NON-INTRUSIVE MICROLOOPS UPSTREAM OF STOP BAR AS SHOWN ON THE PLANS. MICROLOOPS SHALL BE 3M MODEL 702 OR APPROVED EQUAL AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS..

7. EACH SET OF TWO OR THREE MICROLOOP PROBES SHALL HAVE A HOME-RUN CABLE, WHICH SHALL BE CONTINUOUS WITHOUT SPLICES BETWEEN THE CONTROLLER CABINET AND THE GROUND BOX ADJACENT TO THE SET OF PROBES. SUCH CABLE SHALL BE MEASURED AND PAID FOR BY THE NUMBER OF LINEAR FEET FURNISHED AND INSTALLED.

8. THE MICROLOOP PROBES SHALL BE MEASURED AND PAID FOR BY THE QUANTITY OF EACH FURNISHED AND INSTALLED. THE CONDUIT BORED UNDER THE ROADWAY AND THE CABLES AND CARRIER MECHANISM THAT ARE INSERTED INTO THE CONDUIT WILL NOT BE MEASURED BUT WILL BE CONSIDERED AS INCIDENTAL TO THE PROBES. THE ASSOCIATED VEHICLE DETECTORS TO BE INSTALLED IN THE CONTROLLER CABINET SHALL BE FURNISHED BY THE CONTRACTOR. SUCH DETECTORS WILL NOT BE MEASURED BUT WILL BE CONSIDERED AS INCIDENTAL TO THE PROBES.

9. MICROLOOP GROUND BOXES SHALL BE USED FOR MICROLOOPS. THESE GROUND BOXES SHALL HAVE A DEPTH SUCH THAT THE CONDUIT AND CARRIER MECHANISM THAT IS BORED UNDER THE ROADWAY SHALL BE LEVEL WITH THE PROBE.

OPTICOM EMERGENCY PREEMPTION EQUIPMENT

1. THE CITY WILL FURNISH OPTICOM PREEMPTION EQUIPMENT: DETECTORS, OPTICOM CABLE, AND DISCRIMINATOR UNITS WHEN SHOWN ON PLANS.

2. THE CONTRACTOR SHALL INSTALL THE OPTICOM DETECTORS ON THE MAST ARM AS SHOWN ON THE PLANS, AND RUN ONE CONTINUOUS OPTICOM CABLE FROM THE DETECTOR TO THE CABINET. CITY WILL MAKE CONNECTIONS.

EXISTING UTILITIES

1. APPROXIMATE LOCATION AND DIMENSIONS OF KNOWN UNDERGROUND UTILITIES HAS BEEN SHOWN ON THE PLANS SHEETS FOR EACH INTERSECTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY LOCATIONS SHOWN ON THE PLANS.

2. CONTRACTOR SHALL CONTACT THE FOLLOWING UTILITY COMPANIES AND AGENCIES 48 HOURS PRIOR TO DOING ANY WORK AT ANY LOCATIONS:

2.1.	ATMOS ENERGY EMERGENCY NO.: ATMOS ENERGY FOR LINE LOCATES:	1-800-817-8090 1-800-344-8377
2.2.	AT&T AT&T FOR LINE LOCATES:	1-800-286-8313 1-800-669-8344
2.3.	CHARTER COMMUNICATIONS	1-866-937-2427
2.4.	TXU ELECTRIC	1-888-313-6862
2.5.	CITY OF FORT WORTH WATER DEPT.	817-871-8298
2.6.	CITY OF FORT WORTH T/PW DEPT. (TRAFFIC SERVICES DIVISION)	817-392-7738 (FAX: 817-392-2533)

3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING AT NO ADDITIONAL COST TO THE CITY:

   3.1. PREVENTING ANY PROPERTY DAMAGE TO PROPERTY OWNER'S POLES, FENCES SHRUBS, MAILBOXES, ETC. ANY DAMAGED PROPERTY WILL BE RESTORED AS DIRECTED BY ENGINEER.

   3.2. LANDSCAPING AND SPRINKLER SYSTEM – THE CONTRACTOR SHALL ADJUST AND REPAIR ANY EXISTING LANDSCAPING AND THE SPRINKLER SYSTEMS AS DIRECTED BY THE ENGINEER TO ALLOW FOR THE PLACEMENT OF ALL SIGNAL EQUIPMENT AND SIDEWALK AND RAMPS. THIS SHALL BE DONE IN A MANNER EQUAL TO OR BETTER THAN THE AREAS ADJACENT TO THE DAMAGED AREAS. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE CONTRACT.

   3.3. PROVIDING ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.

   3.4. PROTECTING ALL UNDERGROUND AND OVERHEAD UTILITIES AND REPAIR ANY DAMAGES.

4. NO ADDITIONAL PAYMENT WILL BE MADE FOR RELOCATION OF ANY FOUNDATIONS OR CONDUIT DUE TO LOCATION OF EXISTING UTILITIES.

5. TEXAS STATE LAW, ARTICLE 1436C, MAKES UNLAWFUL THE OPERATION OF EQUIPMENT OR MACHINES WITHIN 10 FEET OF ANY OVERHEAD ELECTRICAL LINE UNLESS DANGER AGAINST CONTACT WITH HIGH VOLTAGE OVERHEAD LINES HAS BEEN EFFECTIVELY GUARDED AGAINST PURSUANT TO THE PROVISIONS OF THE ARTICLE. WHEN CONSTRUCTION OPERATIONS REQUIRE WORKING NEAR AN OVERHEAD ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT THE OWNER/OPERATOR OF THE OVERHEAD ELECTRICAL LINE TO MAKE ADEQUATE ARRANGEMENT AND TO TAKE NECESSARY SAFETY PRECAUTIONS TO ENSURE THAT ALL LAWS, ELECTRICAL LINE OWNER/OPERATOR REQUIREMENTS AND STANDARD INDUSTRY SAFETY PRACTICES ARE MET.

6. IF ANY CITY OF FORT WORTH WATER UTILITY IS IN THE VICINITY OF A PROPOSED POLE FOUNDATION (WITHIN 3.0 FEET), THEN THE CONTRACTOR WILL HAND DIG TO UNCOVER THE WATER LINE AND VERIFY THAT THE PROPOSED POLE FOUNDATION LOCATION IS SATISFACTORY. THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGES DONE, AND RESTORATION TO UTILITIES AS A RESULT OF HIS/HER OPERATIONS.

7. WATER AND SEWER MAINS MUST BE LOCATED PRIOR TO CONSTRUCTION BY CONTRACTING 871-8275. ANY DAMAGES TO THE UTILITIES AS A RESULT OF CONTRACTOR'S OPERATION SHALL BE REPAIRED BY THE CONTRACTOR'S EXPENSE.

MATERIALS

1. CITY WILL PROVIDE THE MAT4ERIALS SHOWN ON THE ESTIMATE SUMMARY SHEET(S) EXCEPT ITEMS WITH THE WORD CONTRACTOR IN THE FURNISH BY COLUMN. CONTRACTOR MAY BE REQUIRED TO PURCHASE CITY SUPPLIED EQUIPMENT AND MATERIALS FROM CITY. THE COST FOR EQUIPMENT FURNISHED BY THE CITY, TO BE PURCHASED BY THE CONTRACTOR FORM THE CITY IS SHOWN ON THE ESTIMATE SUMMARY SHEET.

2. CONTRACTOR SHALL PROVIDE ITEMS AS NOTED ON THE ESTIMATE SUMMARY SHEET (S) AS NOTED BY THE WORD CONTRACTOR AND ALL ADDITIONAL ITEMS NOT SPECIFIED TO COMPLETE THE CONSTRUCTION OF THE TRAFFIC SIGNAL.

TRAFFIC CONTROL

1. THE CONTRACTOR SHALL SUBMIT A WORK SCHEDULE, TRAFFIC CONTROL PLAN, AND ACQUIRE A STREET USE PERMIT FROM STREET MANAGEMENT, AT 311 W. 10TH STREET.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PEDESTRIANS AND MOTORISTS IN THE AREA OF THE TRAFFIC SIGNAL CONSTRUCTION SITE.

3. ROADS AND STREETS SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES. CONTRACTOR SHALL ARRANGE CONSTRUCTION SO AS TO CLOSE ONLY ONE LANE OF A ROADWAY AT A TIME.

4. ALL CONSTRUCTION OPERATIONS SHALL BE CONDUCTED TO PROVIDE MINIMAL INTERFERENCE TO TRAFFIC. ALL TRAFFIC SIGNAL EQUIPMENT INSTALLATIONS SHALL BE ARRANGED SO AS TO PERMIT CONTINUOUS MOVEMENT OF TRAFFIC IN ALL DIRECTIONS AT ALL TIMES.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SIGNAGE NECESSARY DURING CONSTRUCTION.

DRAINAGE

ANY OBSTRUCTION TO EXISTING DRAINAGE DUE TO THE CONTRACTOR'S OPERATIONS WILL BE REMOVED BY THE CONTRACTOR AS REQUIRED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

REFERENCES

REFERENCES TO MANUFACTURERS TRADE NAME OR CATALOG NUMBERS ARE FOR THE PURPOSE OF IDENTIFICATION ONLY. THE CONTRACTOR WILL BE PERMITTED TO FURNISH LIKE MATERIALS OF OTHER MANUFACTURERS PROVIDED THEY ARE OF EQUAL OR BETTER QUALITY AND COMPLY WITH THE SPECIFICATIONS FOR THIS PROJECTS AND ARE APPROVED BY THE ENGINEER.

STREET LIGHTS

EACH STREET LIGHT SHALL BE INDEPENDENTLY FUSED BEFORE IT IS CONNECTED TO THE BREAKER (SEE WIRING CONNECTIONS DETAILS SHEET; DRAWING NO. S5)

CONCRETE POURS

CONTRACTOR SHALL NOTIFY INSPECTOR IN ADVANCE OF ALL CONCRETE POURS. INSPECTOR MUST BE PRESENT WHEN CONCRETE IS PLACED ON THE PROJECT.

WORK SCHEDULE

THE CONTRACTOR CAN WORK ON SATURDAYS, SUNDAYS, OR LEGAL HOLIDAYS, PROVIDING THE FOLLOWING REQUIREMENTS ARE MET:

a. A REQUEST TO WORK ON A SPECIFIC SATURDAY, SUNDAY OR LEGAL HOLIDAY MUST BE MADE TO THE INSPECTOR NO LATER THAN THE PRECEDING THURSDAY.

b. ANY WORK TO BE DONE ON THE PROJECT ON A SPECIFIC SATURDAY, SUNDAY OR LEGAL HOLIDAY MUST BE, IN THE OPINION OF THE INSPECTOR, ESSENTIAL TO THE TIMELY COMPLETION OF THE PROJECT. A WORK DAY WILL BE CHARGED FOR EACH DAY WORK IS PERFORMED.

CABLE

1. WHEN PLAN SHEETS REFERENCE A 16 CONDUCTOR CABLE, THE CONTRACTOR SHALL SUPPLY A 20 CONDUCTOR CABLE AS COVERED BY BID ITEM #20.

2. THE CONTRACTOR SHALL NOT INSTALL NUMBER 10 AWG NEUTRAL CABLE, EVEN IF REFERENCED ON THE PLAN SHEETS (REFERENCE THE WIRING CONNECTIONS DETAILS SHEET.

ELECTRIC SERVICE

1. THE CONTRACTOR SHALL INSTALL THE ELECTRIC SERVICE; WHICH SHALL INCLUDE BUT, NOT BE LIMITED TO OBTAINING THE ELECTRICAL SERVICE PERMIT (COST WAVED BY THE CITY).

2. THE CITY WILL SUPPLY THE ELECTRICAL PEDESTAL SERVICE UNIT AND ANCHOR BOLTS AS SHOWN ON THE ELECTRIC SERVICE DETAILS PEDESTAL SERVICE SHEET.

3. HAVE A SEPARATE 2" SCHEDULE 40 PVC CONDUIT FOR ELECTRICAL SERVICE WIRES (1-BLACK # 8 AND 1-WHITE # 8) FROM METER TO SIGNAL CABINET.

90% SUBMITTAL FOR FINAL DESIGN REVIEW

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION. WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BROWN & GAY ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
J.T. AULDRIDGE, P.E.
TEXAS REGISTRATION NO. 98223
April 22, 2015

REV.	DESCRIPTION	BY	DATE

CITY OF FORT WORTH, TEXAS
TRANSPORTATION & PUBLIC WORKS

NORTH BEACH STREET
NE LOOP 820 TO FOSSIL CREEK BOULEVARD

GENERAL CONSTRUCTION NOTES
SHEET 4 OF 4

Brown & Gay Engineers, Inc.
500 West 7th St., Suite 1800, Fort Worth, TX 76102
Tel: 817-887-6130 ● www.browngay.com
TBPE Registration No. F-1046

DESIGNED: JTA DRAWN: BGE CHECKED: CJK	DATE	SCALE	PROJECT NO.	Sheet
	APRIL 2015	NTS	02238	7 of 179

BROWN & GAY ENGINEERS, INC.
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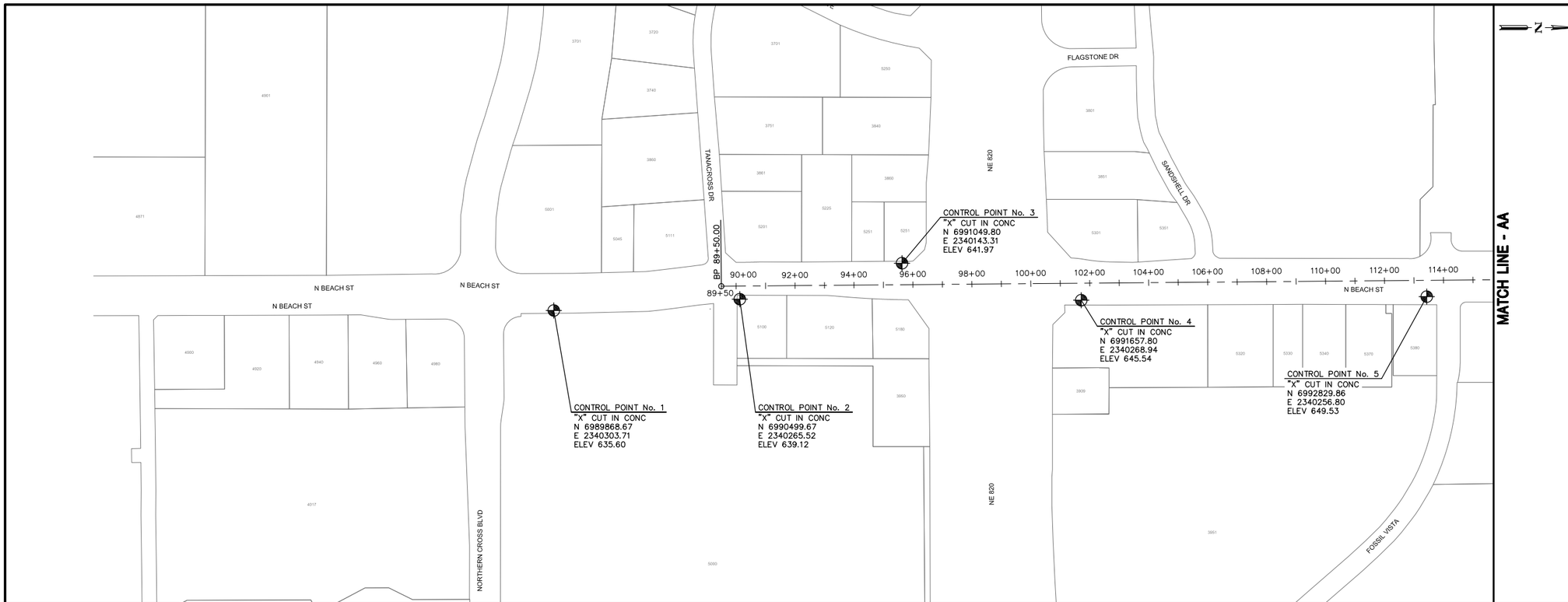

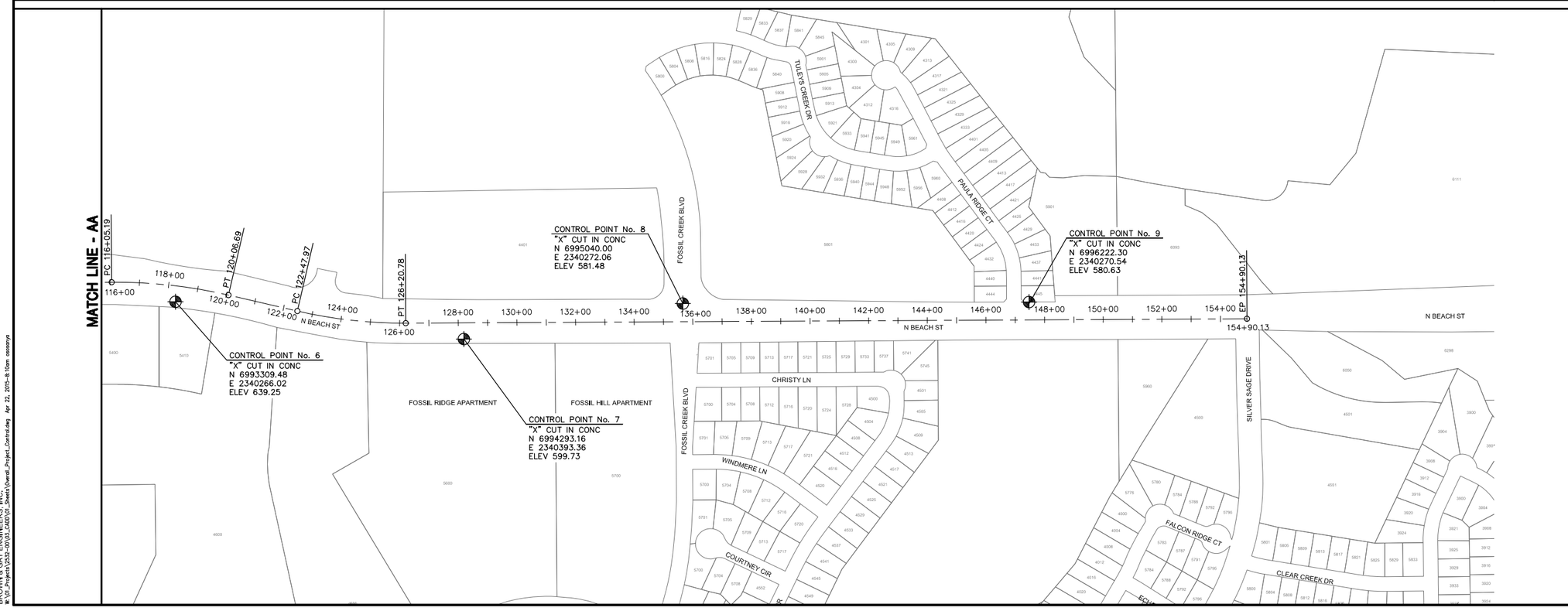

BENCHMARK

CITY OF FORT WORTH NO. 8209

CITY OF FORT WORTH BRASS MONUMENT FOUND, IN CENTERLINE OF 10' INLET, ±1' OFF OF WEST CURBLINE OF N. BEACH STREET, ±604' NORTH OF CENTERLINE OF MIDDLE DRIVE, ±0.5 MILES SOUTH OF NORTHWEST LOOP 820.

ELEVATION = 621.595

NORTH BEACH ST CENTER LINE DATA

STATION	NORTHING	EASTING	DESCRIPTION
89+50.00	6990436.83	2340221.44	BEGIN CENTERLINE
116+05.19	6993091.93	2340199.26	PC
120+06.69	6993490.08	2340243.13	PT
122+47.97	6993725.13	2340297.62	PC
126+20.78	6994094.80	2340338.95	PT
154+90.13	6996964.10	2340324.06	END CENTERLINE

COUNCIL DISTRICT NO. 2

MAPSCO NOS. 21L, 21M, 22B, 22F, 22J & 22K

CITY OF FORT WORTH
MAP NO 2054-460
MAP NO 2060-460
MAP NO 2060-464
MAP NO 2066-464
MAP NO 2066-468

90% SUBMITTAL
FOR FINAL DESIGN REVIEW

0 100 200 400
SCALE: 1" = 200'

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RESPONSIBLE ENGINEER:
BROWN & GAY ENGINEERS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-1046
J.T. AULDRIDGE, P.E.
TEXAS REGISTRATION NO. 98223
April 22, 2015

REV.	DESCRIPTION	BY	DATE

FORT WORTH — CITY OF FORT WORTH, TEXAS TRANSPORTATION & PUBLIC WORKS

NORTH BEACH STREET
NE LOOP 820 TO FOSSIL CREEK BOULEVARD

PROJECT CONTROL

Brown & Gay Engineers, Inc.
500 West 7th St., Suite 1800, Fort Worth, TX 76102
Tel: 817-887-6130 • www.browngay.com
TBPE Registration No. F-1046

DESIGNED: MLF/LNH	DATE	SCALE	PROJECT NO.	Sheet
DRAWN: MLF/LNH	APRIL 2015	1"=200'	02238	8 of 179
CHECKED: JTA				

BROWN & GAY ENGINEERS, INC.
W:\01_Projects\U232-001\03_CADD\01_Sheets\Overall_Project_Control.dwg Apr 22, 2015-8:10am ssasanya
TPW: C210 531200 204230223830 WATER: PXXX-XXXXXXXXXXX SEWER: PXXX-XXXXXXXXXXX K-XXXXXX X-XXXXXX DOE # 7237
NORTH BEACH STREET IMPROVEMENTS – NE LOOP 820 TO FOSSIL CREEK BOULEVARD