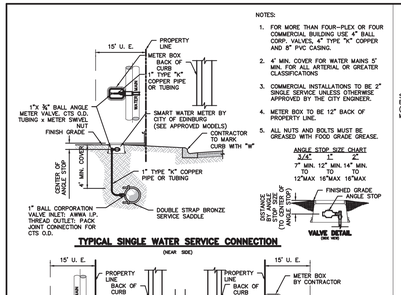
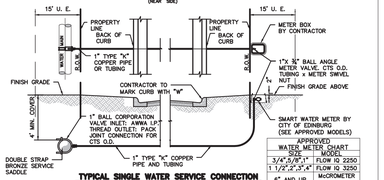


NOTES:

1. FOR MORE THAN FOUR–PLEX OR FOUR COMMERCIAL BUILDING USE 4" BALL CORP., VALVES, 4" TYPE "K" COPPER AND 8" PVC CASING.
2. 4' MIN. COVER FOR WATER MAINS 5' MIN. FOR ALL ARTERIAL OR GREATER CLASSIFICATIONS
3. COMMERCIAL INSTALLATIONS TO BE 2" SINGLE SERVICE UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
4. METER BOX TO BE 12" BACK OF PROPERTY LINE.
5. ALL NUTS AND BOLTS MUST BE GREASED WITH FOOD GRADE GREASE.

TYPICAL SINGLE WATER SERVICE CONNECTION
(NEAR SIDE)

W-1 SINGLE WATER SERVICE CONNECTION

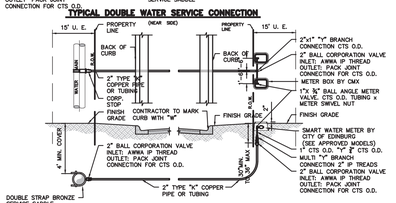


TYPICAL SINGLE WATER SERVICE CONNECTION
(FAR SIDE)

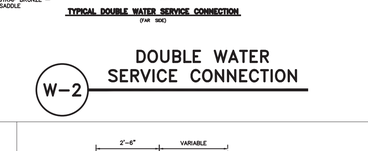
W-1A SINGLE WATER SERVICE CONNECTION

NOTES:

1. FOR MORE THAN FOUR–PLEX OR FOUR COMMERCIAL BUILDING USE 4" BALL CORP., VALVES, 4" TYPE "K" COPPER AND 8" PVC CASING.
2. 4' MIN. COVER FOR WATER MAINS 5' MIN. FOR ALL ARTERIAL OR GREATER CLASSIFICATIONS
3. COMMERCIAL INSTALLATIONS TO BE 2" SINGLE SERVICE UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
4. METER BOX TO BE 12" BACK OF PROPERTY LINE.
5. ALL NUTS AND BOLTS MUST BE GREASED WITH FOOD GRADE GREASE.



TYPICAL DOUBLE WATER SERVICE CONNECTION
(NEAR SIDE)

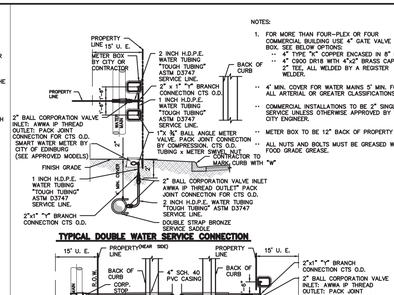


TYPICAL DOUBLE WATER SERVICE CONNECTION
(FAR SIDE)

W-2 DOUBLE WATER SERVICE CONNECTION

NOTES:

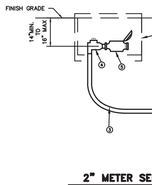
1. FOR MORE THAN FOUR–PLEX OR FOUR COMMERCIAL BUILDING USE 4" GATE VALVE WITH BOX. SEE BELOW OPTIONS:
   - 4" TYPE "K" COPPER ENCASED IN 8" PVC.
   - 4" C900 DR18 WITH 4"x2" BRASS CAP AND 2" TEE, ALL WELDED BY A REGISTER WELDER.
2. 4' MIN. COVER FOR WATER MAINS 5' MIN. FOR ALL ARTERIAL OR GREATER CLASSIFICATIONS
3. COMMERCIAL INSTALLATIONS TO BE 2" SINGLE SERVICE UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
4. METER BOX TO BE 12" BACK OF PROPERTY LINE.
5. ALL NUTS AND BOLTS MUST BE GREASED WITH FOOD GRADE GREASE.



TYPICAL DOUBLE WATER SERVICE CONNECTION
(NEAR SIDE)

TYPICAL DOUBLE WATER SERVICE CONNECTION
(FAR SIDE)

W-2A DOUBLE WATER SERVICE CONNECTION



2" METER SERVICE

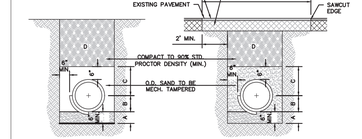
1. 1" x 2" DOUBLE STRAP BRASS SADDLE
2. 2" BALL CORP. MIPX C.T.S.
3. 2" COPPER TUBING TYPE "L"
4. 2" BRASS ANGLE STOP
5. WATER METER NY CITY OF EDINBURG
6. LARGE C.I. METER BOX WILL BE PROVIDED BY CITY OF EDINBURG.
7. METER BOX TO BE 12" BACK OF PROPERTY LINE.
8. ALL NUTS AND BOLTS MUST BE GREASED WITH FOOD GRADE GREASE.

* ALL WATER METERS 4" AND ABOVE SHALL BE PLACED IN A CONCRETE METER VAULT APPROVED BY THE CITY OF EDINBURG.

W-3 WATER SERVICE

NOTE:

WHEN UTILITY LOCATED WITHIN CITY ROW, ALL BACK FILL IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY ENGINEER'S OFFICE



STANDARD PIPE BEDDING (MAIN & SERVICE LATERALS)

APPLICABLE BENEATH FUTURE/UNPAVED STREETS

A. SAND BEDDING PLACED BEFORE PIPE IS LAID TO FLOW LINE OF PIPE (MIN. THICKNESS = 6")

B. SAND BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO 12" SPRING LINE OF PIPE. (4" LIFTS, MECH. TAMPED)

C. SAND BACK FILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE. (6" LIFTS, MECH. TAMPED)

D. FILL TRENCH WITH SELECT BACKFILL, WITH 12" LIFTS COMPACT TO 90% STD. PROCTOR.

FOUNDATION PREPARATION (WELL PONTS), GRAVEL, OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY. THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

STANDARD PIPE BEDDING (MAIN ONLY)

(PARALLEL WITHIN EXIST. STREET)

A. SAND BEDDING PLACED BEFORE PIPE IS LAID TO FLOW LINE OF PIPE (MIN. THICKNESS = 6")

B. SAND BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, MECH. TAMPED)

C. SAND BACK FILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE. (6" LIFTS, MECH. TAMPED)

D. FILL TRENCH WITH SELECT BACKFILL, WITH 12" LIFTS COMPACT TO 95% STD. PROCTOR.

FOUNDATION PREPARATION (WELL PONTS), GRAVEL, OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY. THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

NOTE:

ALL EXISTING/ACTIVE STREET CROSSING SHALL REQUIRE SAND BACKFILL OF ENTIRE TRENCH. (SEE DETAIL S–6)

W-4 WATER STANDARD PIPE BEDDING

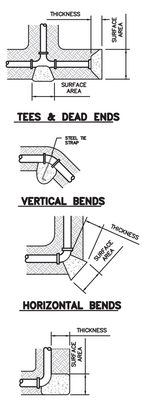
NO.	DATE	ISSUE/REVISION	APP.

THRUST BLOCK SIZE			
HORIZONTAL BENDS			
DIAMETER OF PIPE IN INCHES	SURFACE AREA SQ. FT.	THICKNESS IN INCHES	WEIGHT AT VERTICAL BENDS–LBS.
22–1/2° BEND			
6 OR LESS	2	8	1,700
8	3	12	3,000
10	3.5	12	4,500
12	4	14	6,600
14	5	18	9,000
16	6	18	11,800
45° BEND			
6 OR LESS	4	12	3,200
8	5	14	5,800
10	6	18	9,000
12	7	18	13,000
14	8	24	17,000
16	11.5	24	23,200
90° BEND			
6 OR LESS	6	12	6,000
8	8	15	10,700
10	10	18	16,700
12	12	18	24,000
14	18	24	32,600
16	21	24	42,700
TEES & DEAD ENDS			
6 OR LESS	3	12	---
8	4	15	---
10	6	18	---
12	8.5	18	---
14	11.5	24	---
16	15	24	---

NOTE:

ALL VALUES SHOWN ARE MIN. FOR A HYDROSTATIC PRESSURE OF 150 PSI AND A SOIL RESISTANCE OF 2,000 LBS PER SQ. FT. WITH PIPELINE HAVING A MIN. OF 3 FT. OF COVER WITH CURB AND GUTTER AND A 5 FT. MIN. WITHOUT CURB AND GUTTER

NOTE: SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND SURFACE AREAS



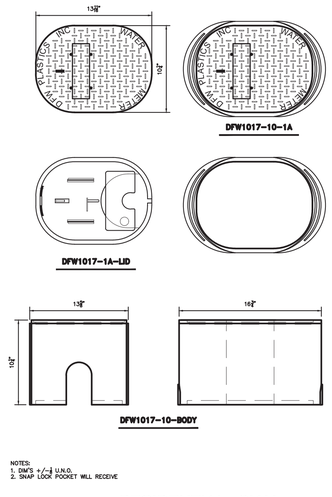
TEES & DEAD ENDS

VERTICAL BENDS

HORIZONTAL BENDS

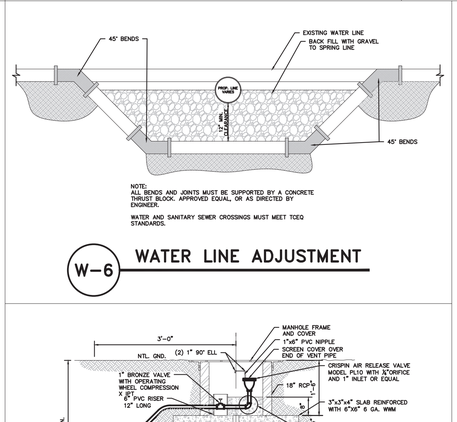
HYDRANT BURYS

W-5 THRUST BLOCKS



NOTES:
1. DIM'S +/–¼ U.N.O.
2. SNAP LOCK POCKET WILL RECEIVE

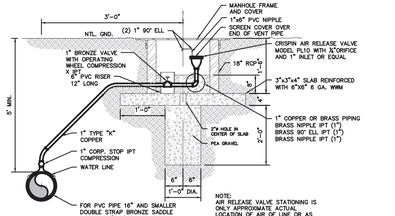
W-12 RESIDENTIAL OVAL PLASTIC METER COVER



NOTE:
ALL BENDS AND JOINTS MUST BE SUPPORTED BY A CONCRETE THRUST BLOCK. APPROVED EQUAL, OR AS DIRECTED BY ENGINEER.

WATER AND SANITARY SEWER CROSSINGS MUST MEET TCEQ STANDARDS.

W-6 WATER LINE ADJUSTMENT



NOTE:
AIR RELEASE VALVE STATIONING IS ONLY APPROXIMATE ACTUAL LOCATION OF AIR OF LINE OR AS DIRECTED BY THE PROJECT ENGINEER.

W-9 AIR RELEASE VALVE INSTALLATION

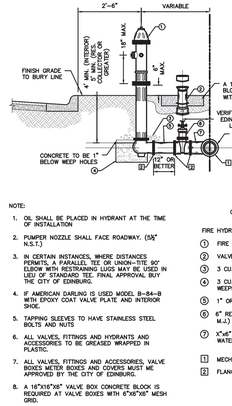
CONSTRUCTION NOTES:

1. ALL CONCRETE TO HAVE A MINIMUM OF 28 DAYS COMPRESSIVE STRENGHT OF 3,000 P.S.I.

CONSTRUCTION NOTES:

A. WATER MAIN (SEE PLANS AND SPECIFICATIONS).
B. TAPPING SLEEVE (SIZE AS REQUIRED).
C. CONCRETE SUPPORT UNDER TAPPING SLEEVE AND BEHIND.
D. THRUST BLOCK AS PER SPECIFICATIONS.
E. FLANGED AND HUB ENDS "O" RING SEALS WITH 2" SQUARE WRENCH NUT GATE VALVE.
F. ANCHOR RODS
G. PVC PIPE
H. SIMPLEX COUPLING

W-13 WATER TAPPING SLEEVE AND VALVE INSTALLATION ON LARGER PIPE



NOTE:

1. OIL SHALL BE PLACED IN HYDRANT AT THE TIME OF INSTALLATION
2. PUMPER NOZZLE SHALL FACE ROADWAY. (5¾" N.S.T.)
3. IN CERTAIN INSTANCES, WHERE DISTANCES PERMITS, A PARALLEL TEE OR UNION–TITE 90° ELBOW WITH RESTRAINING LUGS MAY BE USED IN LIEU OF STANDARD TEE. FINAL APPROVAL BUY THE CITY OF EDINBURG.
4. 6" AMERICAN DARLING B–54–B WITH EPOXY COAT VALVE PLATE AND INTERIOR SHOE.
5. TAPPING SLEEVES TO HAVE STAINLESS STEEL BOLTS AND NUTS
6. ALL VALVES, FITTINGS AND HYDRANTS AND ACCESSORIES TO BE GREASED WRAPPED IN PLASTIC.
7. ALL VALVES, FITTINGS AND ACCESSORIES, VALVE BOXES METER BOXES AND COVERS MUST ME APPROVED BY THE CITY OF EDINBURG.
8. A 16"x16"x6" VALVE BOX CONCRETE BLOCK IS REQUIRED AT VALVE BOXES WITH 6"x6"x6" MESH GRID.
9. ALL NUTS AND BOLTS MUST BE GREASED WITH FOOD GRADE GREASE.

FIRE HYDRANT INSTALLATION CONSIST OF FIRE HYDRANT, VALVE AND VALVE BOX

FIRE HYDRANT UNIT SHALL INCLUDE:

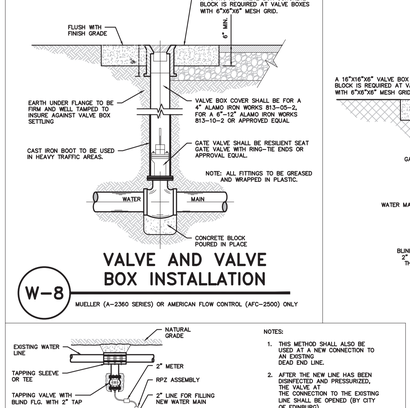
1. FIRE HYDRANT WITH (4½" PUMPER NOZZLE)
2. VALVE BOX (DOMESTIC)
3. 3 CU. FT. GRAVEL
4. 3 CU. FT. CONCRETE 1" BELOW HYDRANT WEEPHOLES
5. 1" OR BETTER PVC SPOOLS
6. 6" RESILIENT SEAT GATE VALVE (FLANGED X M.J.)
7. 6"x6" CAST IRON TEE (FLANGED X M.J.) "X" WATER MAIN DIA.

1. MECHANICAL JOINT
2. FLANGE

MUELLER(SUPER CENTURION 250 A–423) OR AMERICAN DARLING B–84–B (SEE NOTE 4) ONLY

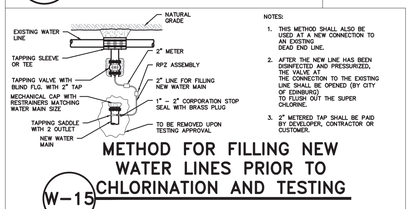
NOTE: FIRE HYDRANT TO BE PAINTED RED.

W-7 FIRE HYDRANT INSTALLATION



W-8 VALVE AND VALVE BOX INSTALLATION

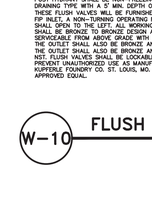
MUELLER (A–2360 SERIES) OR AMERICAN FLOW CONTROL (AFC–2500) ONLY



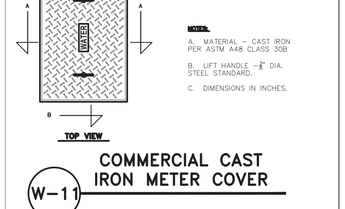
NOTES:

1. THIS METHOD SHALL ALSO BE USED AT A NEW CONNECTION TO AN EXISTING THE CONNECTION TO THE EXISTING LINE SHALL BE OPENED (BY CITY OF EDINBURG) TO FLUSH OUT THE SUPER CHLORINE.
2. AFTER THE NEW LINE HAS BEEN DISINFECTED AND PRESSURIZED, THE VALVE AT
3. 2" METERED TAP SHALL BE PAID BY DEVELOPER, CONTRACTOR OR CUSTOMER.

W-15 METHOD FOR FILLING NEW WATER LINES PRIOR TO CHLORINATION AND TESTING



W-10 FLUSH VALVE



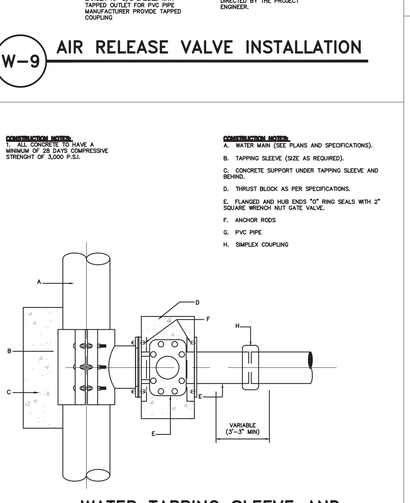
NOTES:

A. MATERIAL – CAST IRON PER ASTM A48 CLASS 30B

B. LIFT HANDLE – ⅜" DIA. STEEL STANDARD.

C. DIMENSIONS IN INCHES.

W-11 COMMERCIAL CAST IRON METER COVER



NOTES:
1. DIM'S +/–¼ U.N.O.
2. SNAP LOCK POCKET WILL RECEIVE

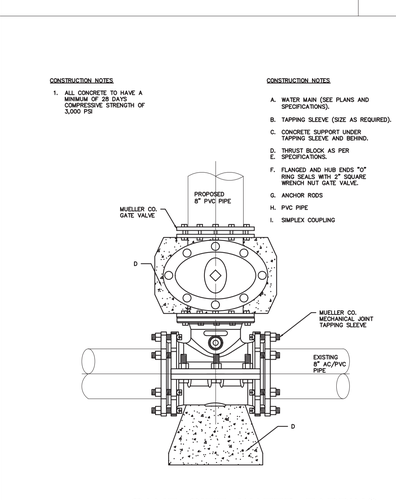
W-12 RESIDENTIAL OVAL PLASTIC METER COVER

CONSTRUCTION NOTES:

1. ALL CONCRETE TO HAVE A MINIMUM OF 28 DAYS COMPRESSIVE STRENGHT OF 3,000 P.S.I.

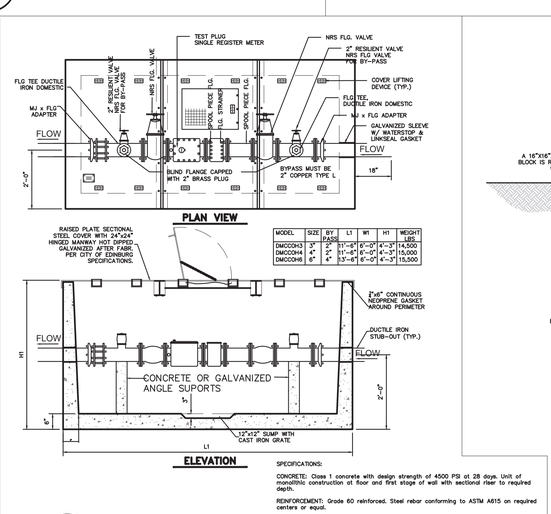
CONSTRUCTION NOTES:

A. WATER MAIN (SEE PLANS AND SPECIFICATIONS).
B. TAPPING SLEEVE (SIZE AS REQUIRED).
C. CONCRETE SUPPORT UNDER TAPPING SLEEVE AND BEHIND.
D. THRUST BLOCK AS PER SPECIFICATIONS.
E. FLANGED AND HUB ENDS "O" RING SEALS WITH 2" SQUARE WRENCH NUT GATE VALVE.
F. ANCHOR RODS
G. PVC PIPE
H. SIMPLEX COUPLING



W-13 WATER TAPPING SLEEVE AND VALVE INSTALLATION ON LARGER PIPE

W-14 SAME SIZE WATER TAPPING SLEEVE AND VALVE INSTALLATION



MODEL	SIZE	BY PASS	L1	W1	H1	WEIGHT LBS
DMCCCH13	3"	2"	11'–6"	6'–0"	4'–3"	14,500
DMCCCH14	4"	2"	11'–6"	6'–0"	4'–3"	15,000
DMCCCH16	6"	4"	13'–6"	6'–0"	4'–3"	15,500

SPECIFICATIONS:

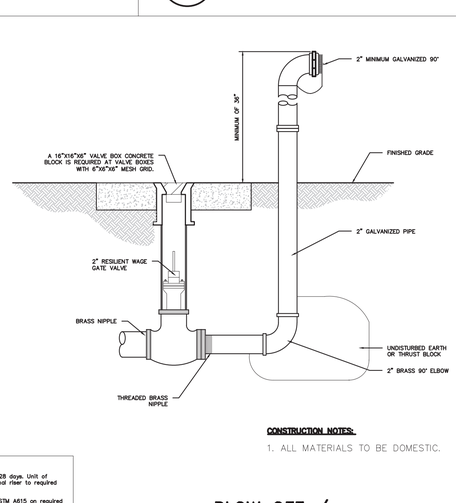
CONCRETE: Class 1 concrete with design strength of 4500 PSI at 28 days. Unit of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

STEEL COVER: All steel fabrication shall be in accordance to AWA D1.1. Steel shall be ASTM A36 carbon steel, and hot dipped galvanized after fabrication in accordance to ASTM A 123. Standard cover is rated for 50 PSF.

ENGINEERING DATA: The meter assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field connection & preparation shall be complete with the exception of valves and fittings at the assembly and shall be approved by one or more of the following associations: American Water Works Association, Underwriters Laboratories, Uniform Plumbing Code, American Society of Sanitary Engineering.

W-16 METER VAULT



CONSTRUCTION NOTES:

1. ALL MATERIALS TO BE DOMESTIC.

W-17 BLOW OFF / TEMPORARY FLUSH OUT

PROJECT NAME:

SHEET NAME:
WATER
STANDARD DETAILS

DATE:
SEPTEMBER 2022

CREATED BY:
CITY OF EDINBURG ENGINEERING DEPARTMENT

DRAWING SCALE: N.T.S.

SHEET OF