

CITY OF GRIDLEY

PUBLIC WORKS
CONSTRUCTION STANDARDS

In Accordance With
Title 15, Chapter 06, Section 010
Of the Gridley Municipal Code
and
ADOPTED BY RESOLUTION NO. 50
of the
GRIDLEY CITY COUNCIL
September 16, 1991
with revisions through
August 18, 2008

INTRODUCTION

The following physical characteristics of the City of Gridley require special design and construction consideration:

- Extremely flat grades.
- High groundwater table at all times.
- Unstable soils below the groundwater table.
- Storm drain outlet restrictions from agricultural drainage channels.

The City Public Works Department is particularly concerned about:

- Accurate establishment of grades, and careful construction practices to maintain the design grades.
- Watertightness of gravity pipelines and structures.
- Adequate construction and safety procedures regarding shoring, bracing, and dewatering of all excavations.
- Building pad elevations established above potential high water elevations, with adequate lot grading to the back of sidewalk.
- Storm drainage detention facilities designed to limit peak flows.

STANDARD SPECIFICATIONS

It is intended that these Construction Standards are to be used in conjunction with the State of California Department of Transportation Standard Specifications, July, 1992 (English Units) Edition.

Earthwork, grading, paving, and concrete work shall conform to the applicable sections of the State Standard Specifications, unless modified by these Construction Standards.

GENERAL DESIGN CRITERIA

GENERAL DESIGN CRITERIA shall apply to the design of all improvements within the City of Gridley which are subject to review by the City Engineer.

DRAWINGS shall be on standard size sheets (22' x 34", 24" x 36", 11" x 17", or 8-1/2" x 11") with standard title block. All lettering shall be 1/8" or larger to permit photographic reduction.

TITLE SHEETS shall have an index or key map clearly indicating the sheet numbers for all drawings.

DESIGNER shall sign each sheet. Designs for structures, and other design subjects required by law to be designed by a Registered Engineer or Architect shall be signed and stamped by the Registered Engineer or Architect.

SOILS REPORT shall, when required, be signed by a Registered Engineer or Geologist.

REVISIONS TO ORIGINAL DRAWINGS must be initialed by the Design Engineer and approved by the Department of Public Works.

IMPROVEMENTS are to be designed and constructed in accordance with these Public Works Construction Standards.

SUBDIVISIONS shall have improvement drawings showing overall layout of the water, sewer, electrical distribution, storm drainage, and streets. Public utility locations shall be shown on the as-built plans for all projects.

PROFILES shall be shown on the improvement drawings for streets and street improvements. Vertical curves shall show all curve data, i.e., length, beginning, ending, P.I., etc. Typical design data shall be shown on all sheets, i.e., elevations, stationing, etc.

SCALE for improvement shall normally be 1" = 40' for the horizontal and 1" = 2' for the vertical. The vertical scale should be changed to 1" = 5', or other appropriate scale where depths are great. For complex plans the scale shall be 1" = 20' or larger as necessary for clarity.

IMPROVEMENT PLANS shall be prepared in pencil or ink on vellum, unless otherwise approved by the City Department of Public Works.

STREET SURVEY CONTROL, horizontal and vertical, storm drainage, subdivision boundary and lot calculations, shall accompany all submittals for checking and approval by the City of Gridley Public Works Department.

GENERAL DESIGN CRITERIA

IMPROVEMENT BONDS, when required, shall include a detailed cost estimate, prepared by the Design Engineer, and approved by the City Department of Public works.

ORIGINAL DRAWINGS shall be revised by the Design Engineer to reflect the as-built conditions, and duplicate or photographic mylar copies shall be furnished to the City prior to final acceptance of the work by the City.

IMPROVEMENT PLANS - REQUIRED CONTENTS

Project Title

Project Design Credits:

Designer's Signature

Date

Scale

Project Approval Signature

Existing pertinent topography, (i.e., street, curb, gutters, storm drains, sanitary sewers, water and gas line, trees, creeks, drainage swales, and other features that will effect design, existing R/W, property lines, street names.)

Profiles of existing improvements and/or ground.

Location of proposed improvements:

R/W, easements, etc.

Horizontal control points (2 min.) with ties

North arrow, contours

A minimum of 2 benchmarks on City Datum with location, description, elevations.

Project stationing (Reading left to right)

Typical sections of work

Cross-sections as required

Profiles of all improvements

Horizontal and Vertical Curves:

Begin Curve (B.C. & B.V.C. or P.V.C.)

End Curve (E.C. & E.V.C.)

Point of Intersection (P.I. & P.V.I.)

Invert Station and Elevations:

All Structures

Gravity Pipelines

General Design Data

Grades

Lengths of design element

Hydraulic gradient

Energy gradient

Other design data as required

Special Notes

References to City Public Works Construction Standards

Drawing Legend

Gridley Public Works Construction Standards

SURVEY MONUMENTATION

SURVEY MONUMENTS:

The procedure and practice of all survey work done upon any subdivision shall conform to the accepted standards of the engineering profession.

All monuments shall not be less substantial than a 3/4-inch diameter iron pipe or 5/8-inch diameter steel reinforcing bar, 18 inches long with a brass tag or plastic cap bearing the registration number of the engineer or surveyor who set the monument, and shall be subject to inspection and approval by the City Engineer. "Permanent" monuments shall be set in concrete. Before street improvements are accepted, all monuments disturbed by the improvements shall be reset.

In making the survey for a subdivision, the engineer or surveyor shall set "permanent" monuments at all angle and curve points on the exterior boundaries of the subdivision, in all street intersections, at all angle points of street lines, and at all points of curvature, both simple and compound, of street lines. "Permanent" monuments at street intersections and at angle and curved points of street lines shall be set on street centerlines, unless otherwise directed by the City Engineer; provided, however, that the "permanent" monuments need not be set at intervals of less than 400 feet.

The "permanent" monuments shall be set in the ground upright with the metal marker centered in the concrete, by excavating a six-inch minimum diameter hole two feet below the finished grade and pouring the same full of concrete. When streets are required to be paved, the location of such monument and access thereto shall be given by a suitable concrete or cast-iron sliding sleeve surmounted by a circular cast-iron frame and lid at street surface. In case the monument is not in a street, the metal marker may be set flush with the existing ground surface.

The engineer or surveyor shall set monuments at all lot corners and at all curve points on lot boundary lines.

There shall be one or more permanent bench marks for each subdivision, of a type approved by the City Engineer and referred to the City Datum, set at each street intersection in the curb return or other location approved by the City Engineer. The bench mark shall be a brass disc two inches +/- in diameter, set in concrete.

STREET DESIGN CRITERIA

The design, layout, width, circulation, and other aspects of streets, both public and private, shall conform to the locations shown on the Circulation Element of the General Plan and approved by the City Public Works Department.

The final improvement plans for streets shall show the survey monuments and rights-of-way referenced to existing property corners, width of paving, and all improvements, i.e., sanitary sewer system, storm drain system, concrete curb, concrete gutter. The widths and locations of adjacent streets shall be shown referenced to centerline stationing or monuments on the final improvement plans for streets.

STREET WIDTHS:

<u>Class</u>	<u>Curb Width</u>	<u>R/W Width</u>
Thoroughfares & Arterials		
2-Lane	40'	84'
4-Lane	64'	84'
Industrial streets	48'	84'
Collector streets	40'	60'

The width of the roadway shall be measured perpendicular or radial to the centerline. Any exceptions to the above widths must be submitted to, and approved by the City Public Works Department.

Intersections of arterials, depending on estimated traffic volumes, may require special design. The need for single and double left turn pockets, free right turn lanes, right turn islands, raised medians, etc., shall be investigated.

Where feasible, when streets are improved for only one-half widths, the unimproved half shall drain away from the paved section and shall be provided with an adequate ditch.

Typical street cross-sections shall be based on 12-foot traffic lanes, and 8-foot parking lanes.

STREET GRADES:

Maximum street grades shall not exceed the following limits:

Arterial Streets	8%
Collector Streets	10%
Minor Streets	15%

STREET DESIGN CRITERIA

Minimum street grades shall not be less than 0.25% unless authorized by the City Public Works Department.

The gradient of a street entering an intersection shall not be more than 5% at the intersection.

Vertical curves are required when grade breaks exceed 1.0%. Vertical curves shall be made with parabolic vertical curves determined by minimum stopping sight distance and good engineering practice established by the City Department of Public Works.

STREET IMPROVEMENTS:

Concrete curbs and gutters shall conform to these Public Works Construction Standards. The minimum grade for curbs and gutters shall be 0.25% unless a reduction is authorized by the City Public Works Department. Rolled curb and gutter shall only be permitted in residential areas on local streets which do not have existing vertical curb and gutter. Installation of rolled curb and gutter on streets which have existing vertical curb and gutter must have specific approval by the Director of Public Works or the City Engineer.

Street improvement plans shall show curb and gutter profiles, including profiles for all curb returns and any approved cul-de-sacs. (Cul-de-sacs require specific approval of the Department of Public Works.)

Concrete sidewalk shall conform to the City Public Works Construction Standards, 4-foot or 9.5-foot wide exclusive of curbs (11.5-foot for existing streets), and no less than four inches thickness for public and private sidewalks, and six inches thickness for driveways.

Concrete sidewalks shall be adjacent and contiguous in design and construction to curbs and gutters unless a non-contiguous parkway sidewalk is specifically approved by the Director of Public Works or the City Engineer, and shall have expansion joints at 20-foot maximum spacing, as required for the curb and gutter.

Curb returns shall be constructed on a curve having a radius equal to that shown below:

<u>Class</u>	<u>(Min.) Curb Return Radius</u>
All Residential Street Intersections	30'
Cul-de-sac	40'
Arterial Street Intersections	30'

Curb and gutter shall be carefully constructed to the design lines and grades. The extremely flat grades necessary in the City of Gridley requires particularly careful construction to maintain flowline and lip of gutter grades within 0.02-feet of design grades at all locations.

STREET DESIGN CRITERIA

STREET IMPROVEMENTS:

Tops of curbs and lips of gutters shall be straight and uniform, and within 1/8" of a 10-foot long straightedge at all locations on straight sections.

The stringent alignment and grade control necessary for minimum grades requires extreme care in the use of extruding machines to construct curb and gutter, and control shall be carefully checked for alignment and grade immediately before pouring.

Any curb and gutter which fails to meet the alignment and grade requirements shall be removed and replaced at no cost to the City.

SIDEWALK REQUIREMENT:

The principal reason for a sidewalk is pedestrian safety. The sidewalk gives the pedestrian a place to walk outside of the vehicular travel lanes. The City's experience has been that graded or graveled areas have not been a satisfactory replacement for sidewalks as property owners' plants, vegetation, landscaping, or fences force people into the street.

Curb and gutter is required to protect the edge of the pavement, to channel storm drainage to collection points, to define the right-of-way for vehicular traffic, to make better use of the City's street sweeping program, and to protect pedestrian sidewalk traffic. Curb and gutter reduces the City's street maintenance costs, establishes reference points for property lines, and shows where underground utilities are stubbed out.

SIDEWALK REQUIREMENT BY PERMIT:

Generally, curb, gutter, and sidewalk are required for all new development in the City. Several exceptions to the basic policy will be discussed later. The sidewalk requirement occurs in several areas under City procedures:

BUILDING PERMITS: Pursuant to Section 12 of the Gridley Municipal Code, any person obtaining a building permit to construct a new residence or develop property is required to construct curb, gutter, and sidewalk along all public street frontage adjacent to the lot. In addition, the builder or developer is required to pave between the edge of the existing street and the gutter. In situations where it is not practical to set grades for the improvements, the property owner must sign a "Deferred Improvement Agreement" that essentially provides that curb, gutter, and sidewalk will be installed upon demand of the City. This agreement also amounts to an automatic "yes" vote in any future assessment district for street improvements.

STREET DESIGN CRITERIA

SUBDIVISIONS: It is the policy of the City that sidewalks are required as a condition of approval of any subdivision. For subdivisions by final map, sidewalk is required prior to the recording of the final map. For subdivisions by parcel map, sidewalk is required at the time of development. The map condition requiring sidewalk construction shall be noted on the recorded parcel map.

USE PERMITS, SITE PLAN REVIEWS, AND VARIANCES: Curb, gutter, and sidewalk are also required as a condition of approval of use permits, site plan reviews, and variances. In addition, the developer is also required to pave between the edge of the existing pavement and gutter. Generally the conditions on these applications are more of an information item since most would fall under the building permit requirements.

SIDEWALK REQUIREMENT BY LAND USE:

There is some variation in the sidewalk requirements for property depending upon the use (zoning). In all cases, curb, gutter, and sidewalk are required. By type of use, sidewalk varies as follows:

SINGLE FAMILY:	Four-foot sidewalk on both sides of the street.
MULTIPLE FAMILY:	Four-foot sidewalk on both sides of the street.
COMMERCIAL:	9-1/2 foot or 11-1/2 foot sidewalk with irrigated tree wells on both sides.
INDUSTRIAL:	Four-foot sidewalk on one side only.

SIDEWALK REQUIRED BY LAND USE:

PLANNED DEVELOPMENT AND MOBILE HOME PARKS: Planned development and mobile home parks are treated somewhat different in that curb, gutter, and sidewalk are only required on the public street frontages. Internal roads within the projects are private, thus no sidewalk requirement is made. Usually planned developments have their own internal walkway system.

STREET TREE WELL LOCATION CRITERIA:

The only situations where tree wells for trees are specified are in commercial or industrial areas where full width commercial sidewalk (curb to property line) is to be constructed. This results in total sidewalk width of 9-1/2 to 11-1/2-feet, and there is enough room for the construction of a tree well immediately behind the curb and to allow for the passage of pedestrians around the tree. Do not attempt to place tree wells in any sidewalk narrower than 7-1/2-feet. Some of the most common obstacles to pedestrians are signs, utility poles, hydrants, parking meters, and building doors that swing out.

STREET DESIGN CRITERIA

The general guidelines relating to the spacing of trees, are that they be located not closer than 25 to 30-feet to intersections, have a spacing between trees of approximately 30 to 35 feet, and no tree is to be planted closer than 10-feet to an interior property line or a driveway. The former instance is to clearly indicate to a property owner that the tree is in front of their property and not on a common lot line where adjacent property owners could have conflicting views regarding tree maintenance or removal. Clearance to driveway locations is to insure that the tree does not create a blind spot for motorists attempting to exit the driveway into oncoming traffic.

Regarding the spacing of trees along the streets, a number of considerations are involved in addition to the above mentioned intersection, property lines, and driveways. Power poles, street light standards, fire hydrants, the location of underground utilities and services, the placement of parking meters and stalls along the street, and the architecture of a building itself often dictates when and where a tree is to be located. Do not place a tree immediately next to a parking meter where a person cannot get to the meter, nor in the middle of a parking stall so that it hinders or obstructs a person from opening a car door to enter or exit a vehicle.

STREET TREE WELL LOCATION CRITERIA:

Do not place a tree so close to power poles and street lights that the spread of the tree would interfere with access to the pole by utility companies or obliterates the lighting effect from the street lights, nor so close to a fire hydrant that it hinders the Fire Department's use of the hydrant.

Do not locate trees adjacent to water meters, nor over utility service lines. Consideration should be given to height clearances for traffic control signs and street sweeper operation in the selection of trees for planting.

Tree locations should be coordinated with building designs to provide shade for energy conservation without obstructing entrances or windows.

DRIVEWAY STANDARDS AND CRITERIA:

DRIVEWAYS - GENERAL: All driveway approaches in City right-of-way shall be constructed in conformance with these Public Works Construction Standards or as modified for special situations described herein.

1. A residential driveway apron shall be constructed between the curb and the property line with Portland cement concrete per driveway standards.
2. A commercial driveway apron to a parking lot or "drive-in" business shall be constructed between the curb and the property line with Portland cement concrete, per driveway standards.

STREET DESIGN CRITERIA

3. An industrial driveway apron shall be constructed between the curb and the property line with an approved Portland cement concrete structural section, based on the amount of truck traffic (TI) and ability of the soil (R-value) to withstand truck wheel loads.
4. In all cases, it shall be the responsibility of the abutting property owner to maintain the driveway apron in a safe and suitable condition for the traffic to be carried, whether pedestrian or vehicular.

COMMERCIAL - INDUSTRIAL HIGH VOLUME DRIVEWAYS: Commercial and industrial driveways that serve a substantial number of vehicles or trucks shall have dimensions, sight distance, geometrics, spacing, etc., determined by the City Engineer.

ONE-WAY DRIVEWAYS: One-Way entrance or exit driveways shall conform to these Public Works Construction Standards for commercial driveways or as modified by the City Engineer for special situations.

AMOUNT OF FRONTAGE ALLOWED FOR DRIVEWAYS: Not more than 60 percent of the frontage of any parcel may be devoted to driveways.

DRIVEWAY WIDTH "W": The total width of driveways shall be measured between full height curb.

MINIMUM WIDTH "W":

1. The minimum width of driveways for one and two family residences shall provide for a bottom width of 12 feet, exclusive of the transition to full curb height at both ends.
2. The minimum width of all other driveways shall provide for the safe, efficient, and economical movement of traffic and should be approximately 24 feet, exclusive of the transition to full curb height at both ends .

MAXIMUM WIDTH "W":

1. The maximum width of driveways for one and two family residences shall provide for a bottom width of 24 feet, exclusive of the transition to full curb height at both ends.
2. The maximum width of all commercial driveways shall be 35 feet, exclusive of the transition to full curb height at both ends, except this may be increased by the City Engineer where necessary to provide for the safe, efficient, and economical movement of traffic.
3. In the case of a driveway located adjacent to an alley, if approved by the City Engineer, the driveway apron may be combined with the alley but the total combined width shall not exceed 40 feet.
4. The driveway width may be modified by the City Engineer to facilitate turning movements where curb lanes are used.

STREET DESIGN CRITERIA

DISTANCE BETWEEN DRIVEWAYS:

1. The minimum length of full height curb between a driveway and a side property line shall be 3 feet.
2. The minimum length of full height curb between driveways on adjacent lots shall be six feet unless specific approval of a shorter length is given by the City Engineer.
3. No driveway shall be located closer than six feet from an existing or future alley entrance except as provided elsewhere in these standards.
4. Where two or more driveways are constructed on the same lot, the minimum length of full height curb between driveways shall be 24 feet. Where practical to provide parking, the total length of full height curb between driveways shall be in multiples of 22 feet.

DRIVEWAY GRADE (SLOPE): The maximum grade for driveways shall be limited to 12.5%. Eight percent is a desirable maximum for commercial-industrial driveways.

DRIVEWAY DISTANCES FROM UTILITY OR SAFETY DEVICES: No driveway shall be located closer than five feet from a fire hydrant, traffic signal, street light standard, utility pole, or guy wire.

UTILITY RELOCATION: Relocation of utility company's facilities or other public improvements to accommodate a driveway shall be accomplished without cost to the City.

SIGNAL AND ELECTRICAL CONDUIT: Where traffic signal or highway lighting is planned or anticipated, a minimum of one 2-inch PVC-P&C TC-6 conduit shall be placed under any new driveway apron and extend a minimum of one foot beyond the ends of the driveway. The conduit shall be placed behind, and a minimum of 24 inches below, the top of curb.

REMOVAL OF EXISTING DRIVEWAYS: When driveway construction is to take place on a parcel, any abandoned driveways shall be removed and replaced with standard curb, gutter, and sidewalk concurrently with the new construction and without cost to the City.

MODIFICATION: The above standards may be modified by the City Engineer for hardship conditions or where necessary to provide for the safe and efficient movement of traffic.

INTERSECTIONS:

<u>Class</u>	<u>Tangent Distance Required at Street Intersections</u>
Local Street	50'
Collector Street	100'
Arterial Street	Require Special Design

STREET DESIGN CRITERIA

INTERSECTIONS:

Deviation from the above design standards shall be approved by the City Department of Public Works.

The centerline of streets entering upon opposite sides of any given street shall normally align, or shall be offset by at least 200 feet for local residential streets and 300 feet for all other streets. Local streets shall normally be designed as "T" type intersections.

Cul-De-Sacs: Dead-end streets require special approval by the City Engineer, and if approved shall terminate in a paved turn-around and shall have a 40-foot minimum curb line radius at the turn-around. If approved, cul-de-sacs shall not exceed 500 feet in length, measured from the centerline of the intersecting street to the center of the cul-de-sac "bulb".

HORIZONTAL CURVES:

The radius of curvature in the centerline of the street shall be not less than:

Arterial Streets	650'
Collector Streets	200'
Minor Streets	75'

Superelevation Rate: -2% from the center line towards the right-of-way line shall be typical cross slope. Deviation from the typical superelevation rate shall be considered due to gutter drainage run-off, horizontal curve requirements, etc.

STRUCTURAL SECTION:

Structural design of pavement, which includes the structural section to be used, shall be based on soil tests results, the TI (Traffic Index), and standard gravel equivalent calculations according to good engineering practice and shall be approved by the City Public Works Department.

Slopes: Earth slopes in cut or embankment sections shall not be steeper than two feet horizontal to one-foot vertical, unless steeper slopes have been approved by the City Public Works Department based on a soil report.

STREET LIGHTS:

Street lights shall be located as directed by the Gridley Electric Department, and shall be 100 Watt High Pressure Sodium Lights installed on 25-foot tapered steel poles with 8-foot arms, as approved by the City Engineer. Pole bases shall be in accordance with the Standard Details.

COMPACTION DENSITY REQUIREMENTS IN STREETS

To clarify City requirements for the compaction of street subgrade and base materials, the following criteria shall apply:

Maximum Density - Optimum moisture relationships (compaction tests), will be determined in accordance with ASTM D 1557, Method C, (dry density).

Subgrade shall be:

Compacted to a relative compaction of 92 percent for all soil material (cohesive, clay).

Compacted to a relative compaction of 95 percent for all granular material (non-cohesive, granular soils).

Aggregate base shall be compacted to 95 percent relative compaction.

Asphalt concrete pavement shall be compacted to 95 percent relative compaction (ASTM D 1188 Test Method).

Class A or B backfill for trenches shall be compacted to 95 percent relative compaction.

Class C backfill for trenches shall be compacted to 92 percent relative compaction.

Compaction test results will be acceptable as meeting the 95 percent requirement if the average of all tests is 95 percent with no individual test lower than 93 percent.

Compaction tests will be acceptable as meeting the 92 percent requirement if the average of all tests is 92 percent with no individual test lower than 90 percent.

WATER SYSTEM DESIGN CRITERIA

PIPE MATERIALS FOR MAINS:

Ductile Iron Pipe
PVC Pipe - AWWA C900 Cast Iron Dimensions

MINIMUM PIPE SIZES FOR MAINS:

6" for looped mains and interconnections
8" for unlooped mains
10" for transmission mains between wells

VALVES shall be resilient wedge gate valves installed in accordance with the standard details. A sufficient number of valves shall be provided to permit isolation of each main, not more than 600 feet in length.

FIRE HYDRANTS shall be dry barrel hydrants, Waterous Pacer WB-67 located as directed by the Fire Chief, and not more than 400 feet apart. Hydrant installation shall be in accordance with the City Standard Details.

SERVICES shall be installed in accordance with the Standard Details. All water services shall be single services, 1" minimum diameter. Backflow prevention devices shall be installed on all services to property with access to water from a private well or separate water service, and on all services to properties with potential contamination sources, as determined by the City Engineer and/or the California State Department of Health Services.

MINIMUM COVER for water mains shall be 30 inches, with 36 inches of cover desirable whenever possible.

CROSS-CONNECTION CONTROL ON FIRE SPRINKLER SYSTEMS:

Considerable confusion has arisen regarding the intent and purpose of AB 2503, Chapter 425, Statutes of 1982, which adds Section 13114.7 to the Health and Safety Code. Any regulations implementing the provisions of Section 13114.7 of the Health and Safety Code must be promulgated or approved by the State Fire Marshal in accordance with Section 11342.3 of the Government Code.

Section 13114.7 makes it clear that no backflow prevention devices other than those specified in the Standards of the National Fire Protection Association (NFPA) may be required for Class I and II fire sprinkler systems. Class I automatic fire sprinkler systems are those systems supplied by public water mains only (i.e., no pumps, tanks or reservoirs, physical connection from other water supplies, and no anti-freeze or other additives of any kind).

Class II systems are the same except that booster pumps, whose sole source of supply is the public water system, may be installed in the connection from the street main.

WATER SYSTEM DESIGN CRITERIA

Automatic fire sprinkler systems which have cross-connections to unapproved sources of water, in addition to being connected to the public water mains, shall have backflow protection as required by American Water Works Association M-14 for Class III, IV, V, and VI fire systems.

All automatic fire sprinkler systems shall be installed in accordance with provisions of NFPA #13, "Installation of Sprinkler Systems". All systems shall have a fire department connection as required by NFPA #13, unless waived by the Fire Chief. All Class I and II automatic fire sprinkler systems, as with all fire extinguishing systems, shall be serviced and maintained on a regular basis in accordance with the provisions of Chapter 1.8 (starting with Section 13195) of Part 2 of Division 12 of the Health and Safety Code.

In accordance with NFPA #13, each automatic fire sprinkler system shall have an alarm check valve, or equivalent, which is listed and approved for fire system use. Each fire department connection shall have a listed check valve as required by NFPA #13. Further, the fire department connection shall be attached to the sprinkler system above the alarm check valve assembly and not on the supply side. Class I and II systems connected to public mains only do not require double backflow protection devices. Since Class I and II systems are located on public water mains and fire hydrants, the public mains shall be used for supplementary water except in cases of extreme emergency situations where a fire progresses beyond the design criteria of the system and additional water, either in volume or pressure, is required to control the fire situation.

When such added water is needed, it shall be taken from fire hydrants on the public mains through the appropriate fire department pumper and hose lines. The connection shall not be used to pump water from any source other than the public water system.

Connections to the existing water system shall be made only at locations approved by the City Engineer. A gate valve shall be provided at the point of connection to isolate the new water mains from the existing system. All work related to the connection shall be done by the Contractor with full-time inspection by the Department of Public Works.

Hot tap connections shall be avoided, if possible, and will not be allowed on existing steel pipelines, nor when the diameter of the service line is greater than 2/3 of the diameter of the main. If hot tapping is approved by the City Engineer, the Contractor shall have the tapping sleeve and valve fully installed, thrust blocked, supported, and approved by the City prior to making the hot tap, and the tap shall be the full nominal diameter of the tapping sleeve and valve.

WATER SYSTEM DESIGN CRITERIA

HYDROSTATIC TESTS:

All parts of the entire pipeline installation shall be tested at 100 psi minimum pressure, or a pressure of 50 psi above the maximum working pressure. Tests shall be made in the presence of the City Engineer or his representative.

Before the test, the pipeline shall be sufficiently anchored to withstand the test pressure. During the filling of the line with water, precautions shall be taken to prevent air pockets at high points. Water may be allowed to stand in the line for several hours prior to the test. During the test, which shall be conducted for the time period determined by the City Engineer, but not less than two (2) hours, the leakage shall not exceed 5 gallons per 24 hours per thousand feet of pipe per inch of nominal diameter. Test sections shall be as short as valve configurations permit. If any valved section of pipe shows greater leakage than specified, the Contractor shall locate and repair the leaks and shall retest that section of line at no additional cost to the Owner.

FLUSHING AND STERILIZATION OF COMPLETED MAINS:

In general, the methods outlined in AWWA C601 entitled, "Disinfecting Water Mains," should be used as a guide in performing this operation where applicable.

Preliminary flushing of completed lines prior to chlorination shall be accomplished as thoroughly as possible with the water pressure and outlets available. The flushing shall be done after the pressure tests have been made.

Before being placed in service, the entire line shall be chlorinated. Chlorine shall be applied by one of the following methods: Liquid chlorine, gas-water mixture, fed-chlorine gas, or calcium hypochlorite water mixture, unless another method (such as Chlorine "HTH" Tablets) is approved by the City Engineer. The chlorinating agent shall be applied at the beginning of each section adjacent to the feeder connection and shall be injected through a corporation cock, hydrant, or other connection ensuring treatment of the entire line.

Water shall be fed slowly into the line with chlorine applied in amounts to produce a dosage of 40-50 parts per million. Portions of the existing mains which have been connected to a new line or otherwise contaminated by construction shall be included in the system sterilized. A residual of not less than 10 parts per million after 24 hours shall be produced in all parts of the line. During the chlorination process, all valves shall be operated.

If disinfection by chlorine "HTH" tablets is permitted by the City Engineer, the tablets shall be secured to the top of the pipe with an approved adhesive.

WATER SYSTEM DESIGN CRITERIA

After chlorination, the water shall be flushed from the lines at the extremities until the replacement water tests are equal, chemically and bacteriologically, to those of the permanent water supply.

SANITARY SEWER DESIGN CRITERIA

MAIN LINE SEWERS:

Minimum pipe size shall be 8" .

Pipe material shall be polyvinyl chloride, or ductile cast iron.

Joints shall be approved ASTM standard flexible gasketed joints for the pipe material used.

Design calculations shall be submitted to verify line size and bedding design, as well as Class or Type of pipe.

Manning "N" values to be used:

PVC N = 0.010

DIP N = 0.012

All dead ends shall have a Standard Rodhole not more than 200 feet from a manhole.

Minimum slopes shall be selected to maintain a minimum velocity of 2 FPS, with the pipe flowing full.

GRADE: The sanitary sewer shall be accurately constructed to the design lines and grades. The extremely flat grades necessary in the City of Gridley require particularly careful construction to maintain invert grades within ± 0.02 feet vertically, and ± 0.05 feet horizontally.

DESIGN FLOW CRITERIA:

Domestic: In residential areas, use 250 gallons per day per "equivalent household unit" for average daily flow. Maximum domestic flows should be based on the ratio of peak to average flows as determined by using a Peak Factor of:

$$PF = 2.80 \times Q^{(-0.155)} \quad (Q \text{ in MGD})$$

$$PF = 7.72 \times Q^{(-0.155)} \quad (Q \text{ in GPM})$$

Design flows shall be the peak domestic flows plus 200 gallons per acre per day allowance for stormwater inflow and groundwater infiltration.

WATERTIGHTNESS TESTING: Tests for watertightness shall be made in the presence of a City representative. The Contractor shall furnish all labor, materials, tools, and equipment required to make the tests. No testing for final acceptance of the pipeline will be done until the trench has been fully backfilled and acceptably compacted to finish grade or pavement subgrade.

SANITARY SEWER DESIGN CRITERIA

All sections of pipe shall be tested, and tests shall be made from manhole to manhole. The sewer shall be complete with laterals, if any. Exfiltration tests shall be made with air except where the use of water is approved by the City Engineer. Air shall be slowly supplied to the plugged pipeline installation until the internal air pressure reaches 4.0 p.s.i. greater than the average back pressure of any groundwater that may submerge the pipe. At least two minutes shall be allowed for temperature stabilization. The rate of air loss shall then be determined by measuring the time required for the internal pressure to decrease from 3.0 p.s.i. to 2.5 p.s.i. greater than the average backpressure of any groundwater that may submerge the pipe. Pipelines shall be considered acceptable when the time required for the 0.5 p.s.i. pressure drop is greater than:

Test Time (secs.) = 36.3 x Pipe Diameter in inches.

PVC or DIP at 0.0010 cubic feet per minute per square foot of internal pipe surface.

Testing with water may be requested by the Contractor. If approved by the City Engineer, the test shall be performed from manhole to manhole by plugging the sewer pipe at the down-stream manhole and filling the pipe to a level 5-feet above the top of the pipe at the upper manhole, or 5-feet above the groundwater level, whichever is greater. The rate of leakage shall be determined by measuring the amount of water required to maintain the water level at the upper manhole. The test shall be conducted for a period of at least two hours. The City Engineer may, at his discretion, require a longer test period. Leakage shall not be in excess of the rate of 20 gallons per inch of pipe diameter per 1,000 lineal feet of pipe per day.

MANHOLES:

Manholes are required:

At changes of slope.

At changes of pipe size.

At changes of direction unless the design, as approved by the City Public Works Department, allows for large radius curves.

Intersections of mains.

Maximum spacing of 400 feet.

Ends of lines more than 200 feet in length.

SANITARY SEWER DESIGN CRITERIA

All manholes shall be numbered on the plans.

Precast manhole bases shall have the invert slopes constructed to match the plan grades, without additional drop through the manhole, and shall have "O-Ring" or equivalent joints to the sewer pipe.

Cast-in-place manhole bases shall include waterstops on all plastic pipes cast in the base. The finish of the base shall be smooth, and equivalent to a steel trowel finish.

All manholes shall be tested for leakage by filling with water. Leakage shall not be greater than 0.15 gallons per day per square foot of interior surface area. All visible leaks shall be repaired.

SEWER LATERALS:

Pipe Materials:

- PVC
- ABS
- Ductile Iron Pipe

Size:

Minimum 4" diameter. Larger diameter laterals may be required by the City Engineer.

Depth:

- 3' minimum at property line
- 1' minimum at building service

Slope:

2% preferred, 1% minimum if approved by the City Engineer or Director of Public Works.

Slope designed by Registered Civil Engineer and approved by the City Engineer.

Connections:

All connections shall be made in a method approved and inspected by the City Department of Public Works.

Calder couplings shall not be used, and connections shall be similar and equal to a 12-inch long Romac Style LSS sewer clamp coupling, unless otherwise specifically approved by the Director of Public Works or the City Engineer.

STORM DRAINAGE DETENTION FACILITIES

DESIGN OBJECTIVE

The peak stormwater discharge flow rate from the gross area of the land development project site, and all tributary public rights-of-way, after full development during a 100-year (1% probability) design storm event of any duration shall not exceed the peak stormwater discharge flow rate from the undeveloped project site and all tributary public rights-of-way, based upon a 100-year (1% probability) design storm event.

Design calculations and drawings shall be prepared by a registered civil engineer to demonstrate that this design objective is fulfilled. Calculations and drawings shall be site-specific for the proposed land development site, and shall be based upon actual construction conditions. (The improvements to be constructed must be hydraulically consistent with the design assumptions presented in the calculations.)

The property owner shall have the design engineer inspect the construction of the storm drainage detention facilities, and the engineer shall provide the City with reproducible "As-Built" plans for the improvements, together with his or her certification that the improvements were constructed in accordance with the approved design and that the completed facility will operate and function in accordance with the engineer's design. The required certification must be approved by the City Engineer and/or the City Building Official.

DESIGN STORM PARAMETERS

The 100-year (1% probability) design storm events for the development site shall be based upon the rainfall intensity-duration data presented in the Gridley Public Works Construction Standards. The storm drainage detention facility shall have adequate storage capacity for a 100-year (1% probability) design storm event of any duration (not just for the time of concentration for the site) with adequate freeboard, subject to the approval of the City Engineer.

DESIGN TIME OF CONCENTRATION

For the undeveloped site, the overland flow portion of the time of concentration shall be determined with the following overland flow equation (Caltrans Design Manual):

$$t_o = \frac{1.80 (1.10 - C) (L^{0.50})}{S^{0.333}}$$

Where:

- t_o = Overland flow travel time in minutes.
- C = Runoff coefficient used in the Rational Formula.
- L = Length of overland flow path in feet.
- S = Slope of overland flow path in percent.

STORM DRAINAGE DETENTION FACILITIES

For the developed site, the time of concentration shall be a combination of overland flow time, as determined by the above equation, and the flow time in gutters and/or pipes to the point being evaluated. However, the time of concentration need not be less than 10 minutes.

DESIGN RUNOFF COEFFICIENTS

Design runoff coefficients for use in the Rational Formula shall be "weighted average" values for different surface permeabilities, using values compatible with the following representative values:

Agricultural Land	0.25
Landscaped Areas	0.30
Gravel Walks or Driveways (loose)	0.40
Compacted Aggregate Base	0.80
Asphalt or Concrete Surfaces	0.90
Roof Areas	0.95

Runoff rates used to determine storm runoff detention volumes shall include flows from public areas, including streets, sidewalks, driveways and landscape areas, as well as private areas including buildings, porches, patios, walkways, driveways and landscape areas.

DETENTION FACILITIES OUTFLOW RATES

The outflow rate used to design the detention facility shall be the rate actually flowing from the facility under design conditions. The maximum allowable discharge rate shall only be used when the design calculations demonstrate that this flow rate will be achieved by the facility as constructed.

NOTE: Many computer programs used to calculate required detention volumes assume uniform outflow at the maximum allowable rate. If used, this assumption must be confirmed by the design calculations for the proposed physical construction.

Adequate provisions shall be included in the detention facilities design to accommodate overflows of the detention facilities from storms of greater intensity than the design storm, or for malfunction of the detention facilities, and for discharge of the water without damaging structures or property.

DETENTION "BASIN" DESIGN FEATURES

Surface impoundments used for storm water detention and/or storage shall have adequate security fencing to control access, while providing adequate clearance for maintenance.

STORM DRAINAGE DETENTION FACILITIES

Side slopes of impoundments shall not exceed 2:1, or the maximum slope recommended by a site-specific soils report, whichever is flatter. Adequate erosion control materials shall be provided to ensure the stability of the banks.

Surface impoundments with a least dimension of the top width greater than twenty feet, as well as impoundments which do not have adequate clearance on the tops of the banks for maintenance equipment, shall include ramps to facilitate equipment access to the bottom of the basin for maintenance.

The basin and all appurtenances shall be designed to minimize standing water which may promote mosquito breeding.

ASSURANCE OF LONG-TERM OPERATION

All storm drainage detention facilities shall be constructed to ensure reliable long-term operation. Facilities serving more than one parcel of land shall be located on easements or rights-of-way dedicated to a public agency. Provision shall be made for the assessment of operation and maintenance fees to the parcels served by the facility to pay the full cost of operating and maintaining the detention facilities. (The estimated cost shall be approved by the City Engineer, and the maximum allowable fee or assessment must be sufficient for public agency operation and maintenance of the facilities in case of default by the designated maintenance authority.) If it is necessary to form a special assessment district to facilitate collection of operation and maintenance costs, the property owner and/or the subdivider proposing the special assessment district will be responsible for formation of the district.

Facilities serving one parcel only shall be located on a public easement or right-of-way, or the property owner shall enter into an agreement with the City (acceptable to the City Attorney) that requires the property owner to maintain the detention facilities in perpetuity. Said agreement shall be recorded, and shall run with the land.

MODIFICATION OF EXISTING DETENTION FACILITIES

The alteration or modification of an existing storm drainage detention facility shall be subject to the same design requirements as for construction of a new facility.

STORM DRAINAGE DETENTION FACILITIES

EXCEPTIONS FROM THESE STORM DRAINAGE DETENTION REQUIREMENTS

Only the following development situations will be exempt from full compliance with the storm drainage detention requirements of the Gridley Public Works Construction Standards.

- A. Parcels tributary to existing storm drainage detention facilities, when the proposed project or improvement is consistent with the design parameters used for the design of the detention facilities.
- B. Parcels tributary to existing City storm drainage facilities which provide flow restriction and/or detention within the City, and the proposed project or improvement will not increase the peak rate of flow discharged from the City storm drainage system, if approved by the City Engineer.
- C. Residentially zoned parcels
 - 1. Existing undeveloped residential parcels which were legally created before 1990.
 - 2. Existing developed residential parcels when the proposed improvements will not cumulatively increase the structural coverage by more than 500 square feet from the structural coverage which existed on January 1, 2000.
- D. Commercial or Industrially zoned parcels
 - 1. Alteration, modification, improvement or change that will not increase the computed composite "C" value (runoff coefficient) by more than 5% from the computed composite "C" value for the conditions that existed on the site on January 1, 2000.

STORM DRAIN DESIGN CRITERIA

GENERAL:

All drainage design requirements shall be in accordance with the latest Master Drainage Plan for the City of Gridley.

Design calculations and flow maps for all tributary areas shall be submitted in duplicate with improvement plans.

Topographic maps shall have adequate ground elevations and/or contours (maximum interval - 1 foot), adequate to define boundaries and slope of drainage basin.

Each drainage basin to be identified and correlated to calculations for that basin.

All data and calculations shall be complete and shall have reasonable clarity.

Diversions of all types shall be in strict accordance with applicable laws.

Placement of fills of any magnitude across an existing drainage course shall incorporate a means by which excess flows not handled by the design drainage system can flow overland via essentially the same course as prior to placing the fill across the drainage course without inundating or damaging any structure.

The following storm drain design criteria and charts shall be used with the rational formula for calculating hydrologic and pipe and/or channel design characteristics, i.e., size, type, slope, velocities and entrance, and outlet structures, etc.

The use of onsite and offsite underground storm drain systems, in addition to standard curb and gutters, shall be required:

To limit inlet spacing to 500 feet maximum.

To eliminate valley gutters.

To eliminate a concentrated discharge of drainage into the street.

When the flow of water in the gutter, caused by storm water based on a 10-year storm design criteria, would extend more than eight feet from the face of curb or overtop the curb.

STORM DRAIN DESIGN CRITERIA

The type of drainage facility shall be selected on the basis of the Master Storm Drainage Plan criteria.

The use of valley gutters on collector streets and arterial streets is not acceptable.

Concentrated drainage shall not be discharged to City Streets unless specifically approved by the City Department of Public Works.

DESIGN CRITERIA:

Building pads shall not be inundated during a 100-year frequency storm.

Traffic lanes shall not be inundated during a design frequency storm.

All existing streets shall be assumed to be constructed to ultimate standards.

All major drainage channels and natural streams shall be assumed to be constructed to ultimate standards.

Culverts shall be analyzed using a ponded (no velocity) condition upstream unless a definite channel exists or is proposed upstream. Inlet and outlet transition structures shall be provided to minimize entrance and exit losses.

Minimum size of proposed culverts shall be 12-inches in diameter.

Level of development as shown in the current City of Gridley General Plan.

Recurrence Interval (Storm Frequency):

1. A frequency of ten years for areas less than forty acres and where the proposed drainage structure will not be placed in a natural or constructed sump. Culverts under moderate fills to pass a ten-year storm without static head, and under high fills to pass a 25-year storm with head; however, no damage due to ponding is to occur.
2. A 25-year frequency for areas larger than 40 acres and less than 160 acres. Culverts under moderate fills on collector and local streets are to pass a 25-year storm without static head, and under high fills to pass a 100-year storm with head; however, no damage due to ponding is to occur.
3. A 100-year frequency for areas larger than 160 acres, or where culverts are to be placed under high fills; where a sump condition exists and damage would result due to ponding and where major streets or a freeway are to be crossed. Culverts to pass 100-year storm with head; however, no damage due to ponding is to occur.

STORM DRAIN DESIGN CRITERIA

SUMMARY OF STORM FREQUENCY

Drainage Area (Acres) <hr/>	Design Frequency <hr/>	Culverts under moderate fills <u>without head</u>	Culverts under high fills <u>with head</u>
0-40	10 yr.	10 yr.	25 yr.
40-160	25 yr.	25 yr.	100 yr.
> 160	100 yr.*	100 yr.	100 yr.

* All major streets or freeways, 100 years with head.

The minimum time of concentration shall be 10 minutes.

Vertical Alignment: Match soffits of different sized pipe (not flow lines).

Minimum pipe size is 12" diameter if the City has to maintain.

Drop Inlets: Drop inlets shall be placed at return points upstream from the intersection whenever possible. Maximum spacing of drop inlets or manholes shall be 500 feet.

PIPE MATERIALS: The material for storm drain pipes shall be:

1. Solid-wall PVC pipe with rubber gasket joints, conforming to ASTM D3034 with a minimum SDR of 35.
2. Reinforced concrete pipe with rubber gasket joints, conforming to ASTM C76, Class 3 minimum.
3. High Density Polyethylene Pipe (HDPE), watertight with rubber gasket bell and spigot joints, conforming to AASHTO M294 Type S or AASHTO MP7 with joints conforming to ASTM D3212, and gaskets conforming to ASTM F477. The minimum cover for HDPE pipe shall be one foot to street subgrade.
4. Cast-in-place concrete pipe designed in conformance with the City of Gridley Master Storm Drainage Plan Design Criteria.

The use of cast-in-place concrete pipe shall be subject to the specific approval of the City Engineer, subject to the minimum cover criteria shown below.

STORM DRAIN DESIGN CRITERIA

GRADE: Storm drain pipelines shall be accurately constructed to the design lines and grades. The extremely flat grades necessary in the City of Gridley require particularly careful construction to maintain invert grades within ± 0.02 feet vertically and ± 0.05 feet horizontally.

All storm drains should be designed for a minimum velocity of 2 feet per second, flowing full.

Precast pipes 24" or larger in diameter may be laid on a horizontal curve. The radius of curve shall not be less than 300' unless special pipes with longer lips are used.

D-Load criteria shall be used to design all pipes.

Precast R.C.P. is required in all roadway areas unless top of pipe is more than 36" below sub-grade.

For non-traffic areas (front yard, back yard, etc.) non-reinforced concrete pipe may be allowed.

Poured-in-place pipe cover requirements:

<u>Depth from subgrade to top of pipe (Roadway Area)</u>	<u>Cover</u>
0 - 12"	Not allowed.
12 - 36"	6" reinforced slab with 4" sand over pipe.
36" or more	No special requirement.

Poured-in-place concrete pipe may be laid on a curve as follows:

<u>Pipe I.D. (inches)</u>	<u>Minimum Radius (feet)</u>
24"	50'
30"	50'
36"	50'
42"	65'
48"	80'
54"	100'
60"	120'
72"	130'

STORM DRAIN DESIGN CRITERIA

VALLEY GUTTERS:

Minimum slope across the valley gutter shall be 0.50%, and grade breaks will not be allowed. A minimum of three elevations will be required.

The difference in elevation between the top of the curb at the midpoint of the return and the flowline of valley gutter at the elephant ear shall not to exceed 1.0 foot.

Do not use a valley gutter if there is a storm drain to which water could be dropped in from above. The gutter is to carry water tributary from not more than 500' of street (or one block) whichever is shorter.

EXISTING IRRIGATION AND DRAINAGE CHANNELS:

Existing drainage ditches and channels belonging to the Reclamation Districts and Drainage Districts adjoining the City shall be improved, graded and/or enlarged as necessary to carry the design flows listed in the City of Gridley Master Drainage Plan at the design grade of the channel.

Headwalls and wingwalls shall be provided at each end of pipes or box culverts to minimize entrance and exit losses, and cleanout access structures shall be provided at intervals of 1,000 feet maximum.

The subdivider and/or contractor shall make all necessary downstream drainage improvements in accordance with the Master Drainage Plan sufficient to carry the design flow for a 100-year frequency storm as shown in the Plan without inundating the building pads within the subdivision. Complete, detailed hydraulic calculations prepared by a registered civil engineer shall be submitted to demonstrate compliance with this requirement, and shall be subject to the approval of the City Engineer.

Roadway crossings of existing ditches shall be a reinforced concrete pipe, box culvert, or slab bridge with headwalls and wingwalls, sized to carry the design flow of the ditch, at the design grade of the ditch. All crossings shall be subject to the approval of the City Engineer.

GRIDLEY RAINFALL INTENSITIES

<u>Tc</u> <u>MINS.</u>	<u>I(5)</u> <u>INS./HR.</u>	<u>I(10)</u> <u>INS./HR.</u>	<u>I(25)</u> <u>INS./HR.</u>	<u>I(50)</u> <u>INS./HR.</u>	<u>I(100)</u> <u>INS./HR.</u>	<u>Tc</u> <u>MINS.</u>
10	1.48	1.75	2.16	2.29	2.53	10
11	1.41	1.67	2.06	2.18	2.41	11
12	1.35	1.59	1.97	2.08	2.31	12
13	1.29	1.53	1.89	2.00	2.22	13
14	1.24	1.47	1.82	1.93	2.13	14
15	1.20	1.42	1.76	1.86	2.06	15
16	1.16	1.37	1.70	1.80	1.99	16
17	1.12	1.33	1.65	1.74	1.93	17
18	1.09	1.29	1.60	1.69	1.88	18
19	1.06	1.25	1.56	1.65	1.83	19
20	1.03	1.22	1.52	1.61	1.78	20
21	1.01	1.19	1.48	1.57	1.74	21
22	0.98	1.16	1.45	1.53	1.70	22
23	0.96	1.14	1.41	1.50	1.66	23
24	0.94	1.11	1.38	1.46	1.62	24
25	0.92	1.09	1.36	1.43	1.59	25
26	0.90	1.07	1.33	1.40	1.56	26
27	0.88	1.05	1.30	1.38	1.53	27
28	0.87	1.03	1.28	1.35	1.50	28
29	0.85	1.01	1.26	1.33	1.47	29
30	0.84	0.99	1.24	1.31	1.45	30
31	0.82	0.97	1.21	1.28	1.42	31
32	0.81	0.96	1.20	1.26	1.40	32
33	0.80	0.94	1.18	1.24	1.38	33
34	0.78	0.93	1.16	1.23	1.36	34

GRIDLEY RAINFALL INTENSITIES

Tc MINS.	I(5) INS./HR.	I(10) INS./HR.	I(25) INS./HR.	I(50) INS./HR.	I(100) INS./HR.	Tc MINS.
35	0.77	0.91	1.14	1.21	1.34	35
36	0.76	0.90	1.13	1.19	1.32	36
37	0.75	0.89	1.11	1.17	1.30	37
38	0.74	0.87	1.09	1.16	1.28	38
39	0.73	0.86	1.08	1.14	1.27	39
40	0.72	0.85	1.07	1.13	1.25	40
41	0.71	0.84	1.05	1.11	1.23	41
42	0.70	0.83	1.04	1.10	1.22	42
43	0.69	0.82	1.03	1.09	1.20	43
44	0.68	0.81	1.02	1.07	1.19	44
45	0.68	0.80	1.00	1.06	1.18	45
46	0.67	0.79	0.99	1.05	1.16	46
47	0.66	0.78	0.98	1.04	1.15	47
48	0.65	0.77	0.97	1.03	1.14	48
49	0.65	0.77	0.96	1.02	1.13	49
50	0.64	0.76	0.95	1.01	1.12	50
51	0.63	0.75	0.94	1.00	1.10	51
52	0.63	0.74	0.93	0.99	1.09	52
53	0.62	0.74	0.92	0.98	1.08	53
54	0.62	0.73	0.92	0.97	1.07	54
55	0.61	0.72	0.91	0.96	1.06	55
56	0.60	0.72	0.90	0.95	1.05	56
57	0.60	0.71	0.89	0.94	1.04	57
58	0.59	0.70	0.88	0.93	1.03	58
59	0.59	0.70	0.87	0.92	1.02	59

GRIDLEY RAINFALL INTENSITIES

Tc HRS.	I(5) INS./HR.	I(10) INS./HR.	I(25) INS./HR.	I(50) INS./HR.	I(100) INS./HR.	Tc HRS.
1	0.58	0.69	0.87	0.92	1.02	1
2	0.41	0.48	0.61	0.64	0.71	2
3	0.33	0.39	0.50	0.52	0.58	3
4	0.28	0.34	0.43	0.45	0.50	4
5	0.25	0.30	0.38	0.40	0.45	5
6	0.23	0.27	0.35	0.37	0.41	6
7	0.21	0.25	0.32	0.34	0.38	7
8	0.20	0.23	0.30	0.32	0.35	8
9	0.19	0.22	0.28	0.30	0.33	9
10	0.18	0.21	0.27	0.28	0.31	10
11	0.17	0.20	0.26	0.27	0.30	11
12	0.16	0.19	0.24	0.26	0.29	12
13	0.15	0.18	0.23	0.25	0.27	13
14	0.15	0.17	0.23	0.24	0.26	14
15	0.14	0.17	0.22	0.23	0.26	15
16	0.14	0.16	0.21	0.22	0.25	16
17	0.13	0.16	0.20	0.22	0.24	17
18	0.13	0.15	0.20	0.21	0.23	18
19	0.13	0.15	0.19	0.20	0.23	19
20	0.12	0.15	0.19	0.20	0.22	20
21	0.12	0.14	0.18	0.19	0.22	21
22	0.12	0.14	0.18	0.19	0.21	22
23	0.11	0.14	0.18	0.19	0.21	23
24	0.11	0.13	0.17	0.18	0.20	24

GRIDLEY RAINFALL INTENSITIES

RAINFALL INTENSITY EQUATIONS

$$I(5) = 4.9 \times Tc^{-0.52}$$

$$I(10) = 5.8 \times Tc^{-0.52}$$

$$I(25) = 7.0 \times Tc^{-0.51}$$

$$I(50) = 7.4 \times Tc^{-0.51}$$

$$I(100) = 8.2 \times Tc^{-0.51}$$

* * * * *

Tc in Minutes

I in Inches/Hour

ELECTRIC DISTRIBUTION FACILITIES

STANDARDS: All electric distribution equipment to be connected to the Gridley electric distribution system shall conform to the requirements of the National Electric Code (NEC) and General Order No. 95 of the California Public Utilities Commission.

EXTENSIONS OF CITY FACILITIES

GENERAL POLICY: The City of Gridley will extend its electrical system along public roads, streets, and upon private property across, under and in satisfactory easements or rights-of-way that have been dedicated.

System expansion within the boundaries of a subdivision or other development to be served:

CONSTRUCTION BY THE APPLICANT: The applicant shall provide, at no cost to the City, and in accordance with City standards and specifications, all engineering, trenching, backfill, resurfacing, landscaping, conduit, secondary conductors, junction boxes, vaults, equipment pads and subsurface housings required for power distribution within the development. Upon acceptance by the City, the applicant will transfer ownership to the City.

CONSTRUCTION BY THE CITY: After acceptance of the facilities provided by the applicant, the City will furnish and install all transformers, primary conductors, switches, and other equipment required for the system's extension, and the cost thereof will be charged to the applicant.

CONSTRUCTION CHARGES: Charges will be as set forth by resolution of the City Council. Credit will be given for oversizing of facilities to provide for areas beyond the boundary of the development, computed on the basis of the City's costs for materials.

System extension or reinforcement outside the boundaries of a subdivision or other development to be served:

CONSTRUCTION BY CITY: The City will construct the necessary underground facilities to deliver electric power to the development site. Connection to these facilities will be subject to charges in accordance with fees established by resolution of the City Council, entitled "Utility Connection Charges."

CONSTRUCTION BY APPLICANT: Where mutually agreed, all or part of the required system extension may be constructed by the applicant in accordance with the Gridley Public Works Construction Standards.

ELECTRIC DISTRIBUTION FACILITIES

ECONOMIC JUSTIFICATION OF CONSTRUCTION: A system extension or reinforcement required by a subdivision or other development outside the present electric service area will be considered economically justified if the City's expense and investment in the construction is not greater than 2.0 times the expected gross annual revenue from the subdivision or other development.

If the City Engineer determines that the requested extension is not justified economically, the applicant shall pay as a connection charge, in addition to all other applicable charges, the amount required to reduce the City's investment in the construction to 2.0 times the expected annual gross revenue.

The City Engineer's decision, after consideration of all available facts, will be final.

Extension of the electric distribution system to serve subdivisions or developments will be subject to budgetary considerations and approval by the City Council for any expenditure of City funds not specifically budgeted for.

ELECTRIC SERVICE STANDARDS

SERVICE CONNECTIONS: Only duly authorized employees of the City shall connect or disconnect the customer's service to the City's distribution system.

ELECTRIC UTILITY SERVICES: It is the policy of the City of Gridley that all new electrical utility services shall be provided by underground facilities on the customer's premises. On-site electrical line shall be provided at the customer's expense and shall meet the City's specifications. Overhead service will be permitted only when underground construction, in the opinion of the City Engineer, is not feasible.

NUMBER OF SERVICES: Only one service drop or lateral may be extended to a building or other premises to be served, except:

Two or more service laterals may be extended to a single building or premise, provided they enter the building or other structures at points at least 150-feet apart and that all wiring, other than control or metering conductors, supplied by each service is separate from and entirely independent of wiring supplied by any other source.

Two or more sets of service entrance conductors may be extended to a single switch panel for the purpose of providing additional capacity or backup protection.

NUMBER OF SERVICE WEATHERHEADS PER SERVICE DROP: Not more than two service weatherheads may be serviced from a single overhead service drop.

ELECTRIC DISTRIBUTION FACILITIES

NONSTANDARD OR EXCESSIVE CUSTOMER REQUIREMENTS: If the customer requires nonstandard voltages or excess load and/or transformer capacity because of comparatively large loads of short duration, unusually close voltage regulation, or separate transformers to serve low-revenue loads, the customer shall pay the City the difference in cost of the installation requested by the customer and the City's standard installation.

PHASE BALANCING: When three-wire, single-phase or three-phase service is supplied, the load must be balanced as nearly as practicable between the two sides or several phases. In no case shall the load on one side be twice as great as the other side.

POWER-FACTOR CORRECTION: In the case of devices having low power factors, the customer shall provide, at his own expense, power-factor corrective equipment to increase the power-factor of any device to not less than 90 percent.

REDUCED-VOLTAGE STARTING: All electric motors larger than 50 HP shall have reduced-voltage starting equipment unless this requirement is specifically waived by the Gridley Electric Department.

ELECTRIC METER LOCATION: All electric meters shall be installed in a location with convenient access for the Gridley Electric Department for reading, inspecting, and testing the meters. All proposed meter locations which are enclosed or restricted must be approved in advance by the Gridley Electric Department.

CUSTOMER ORDER PROCEDURE

ORDERING NEW OR ADDITIONAL SERVICE

LARGE SERVICE REQUESTS:

Requests for service to loads of 500 KVA or greater maximum demand must be approved in advance by the Gridley Electric Department.

ALL SERVICE REQUESTS:

Submit two copies of the project plot plan with definite load information for commercial and industrial installations. Furnish this information as soon as possible.

ELECTRIC DISTRIBUTION FACILITIES

Submit two copies of load information with building plans submitted to the Department of Public Works.

Point of service will be as determined by the Gridley Electric Department.

All required fees and charges must be paid prior to connection of service or issuance of building permit.

All electrical work on the customer side of the meter must be inspected before it will be energized. Call 846-3631 for an inspection.

Application for service is to be made at the Public Works Office in City Hall, 685 Kentucky Street.

ORDERING TEMPORARY SERVICE

If temporary service is needed at a construction site, the following procedures should be followed:

1. Contact the Public Works Department at 846-3631. After a field check, the temporary service point will be located and a cost estimate prepared.
2. Customer must sign a "Customer Job Request Form" to authorize customer billing for up and down charges or other costs necessary to provide temporary service.
3. Application for temporary service is to be made at the Public Works Office.
4. Customer shall furnish and install all necessary service equipment on a temporary pole. The installation shall be inspected before connection is made. Call 846-3631 for inspection.
5. If service is overhead, the City will install a service drop to the temporary pole.
6. The customer will be billed actual up and down costs or any temporary installation to the City's distribution system that were required to provide the service.

PLAN SYMBOLS

RECOMMENDED LINE WEIGHTS

CITY LIMIT LINE		(3)
R/W OR PROPERTY LINE		(1)
CENTERLINE OF R/W		(00)
EDGE OF TRAVELED WAY		(00)
DRAINAGE DITCH		(000)
FENCE W/GATES		
RAILROAD TRACKS		
TOP OF SLOPE		(00)
TOE OF SLOPE		
BUILDING		
TIMBER BARRICADE		

STREET NAME SIGN	
CENTERLINE MONUMENT	
BENCHMARK	
TREES	
BUSH, SHRUB	
HEDGE	
TRANSFORMER PAD	
ELEC. PULLBOX W/SERVICE	
POLE & GUY	
ELECTROLIER	
TRAFFIC SIGNALS	

	EXISTING	
SEWER LINE		(000)
WATER LINE		(000)
STORM DRAIN LINE		(000)
GAS LINE		(000)
ELECTRIC CONDUIT/CABLE		(000)
TELEPHONE CONDUIT/CABLE		(000)
TELEVISION CONDUIT/CABLE		(000)
ROLL CURB		(1)
VERTICAL CURB/GUTTER		(000)
COMMERCIAL DRIVEWAY		
RESIDENTIAL DRIVEWAY		
CATCH BASIN		
AREA DRAIN		
MANHOLE		(000)
ROD HOLE		(000)
WATER VALVE		(000)
FIRE HYDRANT		
WATER METER		(000)
REDUCER		(000)
BLOW-OFF		(000)

	PROPOSED	
SEWER LINE		(2)
WATER LINE		(2)
STORM DRAIN LINE		(2)
GAS LINE		(2)
ELECTRIC CONDUIT/CABLE		(2)
TELEPHONE CONDUIT/CABLE		(2)
TELEVISION CONDUIT/CABLE		(2)
ROLL CURB		(00)
VERTICAL CURB/GUTTER		(1)
COMMERCIAL DRIVEWAY		
RESIDENTIAL DRIVEWAY		
CATCH BASIN		
AREA DRAIN		
MANHOLE		(2)
ROD HOLE		(2)
WATER VALVE		(2)
FIRE HYDRANT		
WATER METER		(2)
REDUCER		(2)
BLOW-OFF		(2)

PROFILE SYMBOLS

EXISTING GRADE	
ASPHALT CONCRETE (A.C.)	
AGGREGATE BASE (A.B.)	
CONCRETE	
SAND	
NATIVE GROUND	

NOTES:

- STREET GRADES TO BE LABELED AS PERCENT, I.E. (2.00%).
- PIPE GRADES TO BE LABELED AS SLOPE, I.E. (S=0.020).
- PLACE PLAN/PROFILE DIRECTLY ABOVE ONE ANOTHER, MATCHING STATIONS.
- STATIONS TO RUN LEFT TO RIGHT.
- NORTH ARROWS SHALL POINT UPWARD OR TO THE LEFT.
- NOTES ON EXISTING FACILITIES TO BE PLACED HORIZONTALLY.
- NOTES ON NEW CONSTRUCTION TO BE PLACED ON 45° ANGLE.
- TITLE, PLAN, AND PROFILE SHEETS SHALL BE CITY STANDARD.
- BENCH MARKS SHALL BE INDICATED.
- ALL NEW CONCRETE WORK TO BE SHADED.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

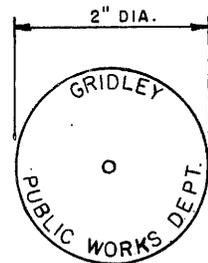
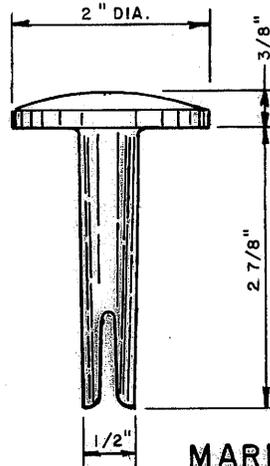
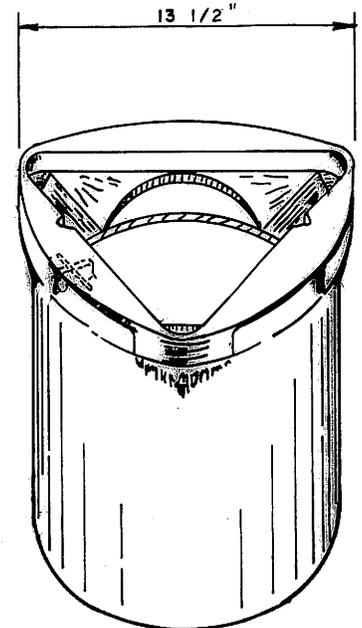
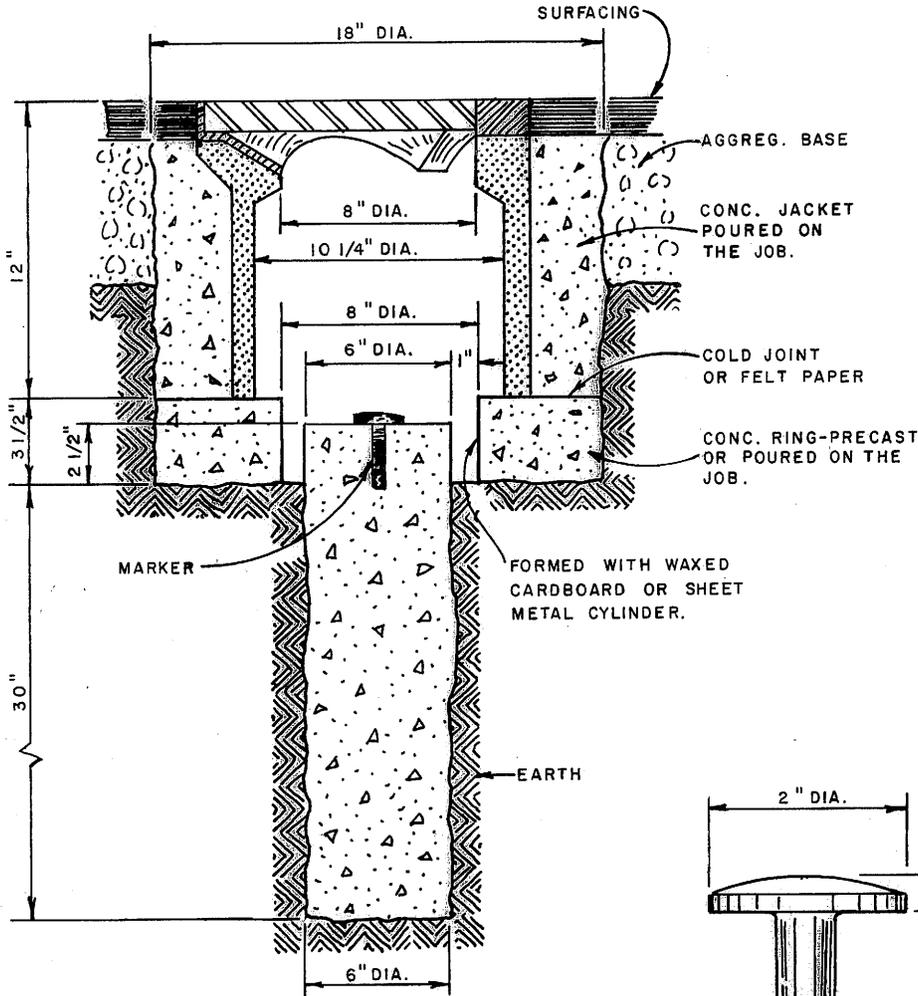
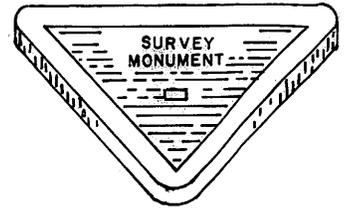
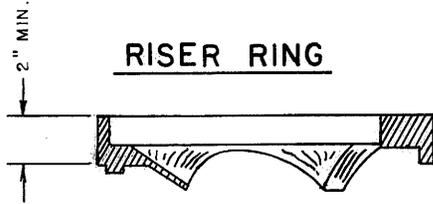
PUBLIC WORKS
STANDARD NO GI

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Randy Rell 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD DRAFTING SYMBOLS

DWG. NO.
1

NOTE:
 WHEN RESURFACING ROAD
 ADD RISER RING BETWEEN
 EXISTING BOX & COVER
 TO MEET NEW ROAD GRADE.



NOTE:
 MONUMENT TO BE NO. 4TT
 VALVE BOX W/C.I. FACE & COVER
 FOR TRAFFIC USE. BROOKS
 PRODUCTS INC. OR EQUAL.

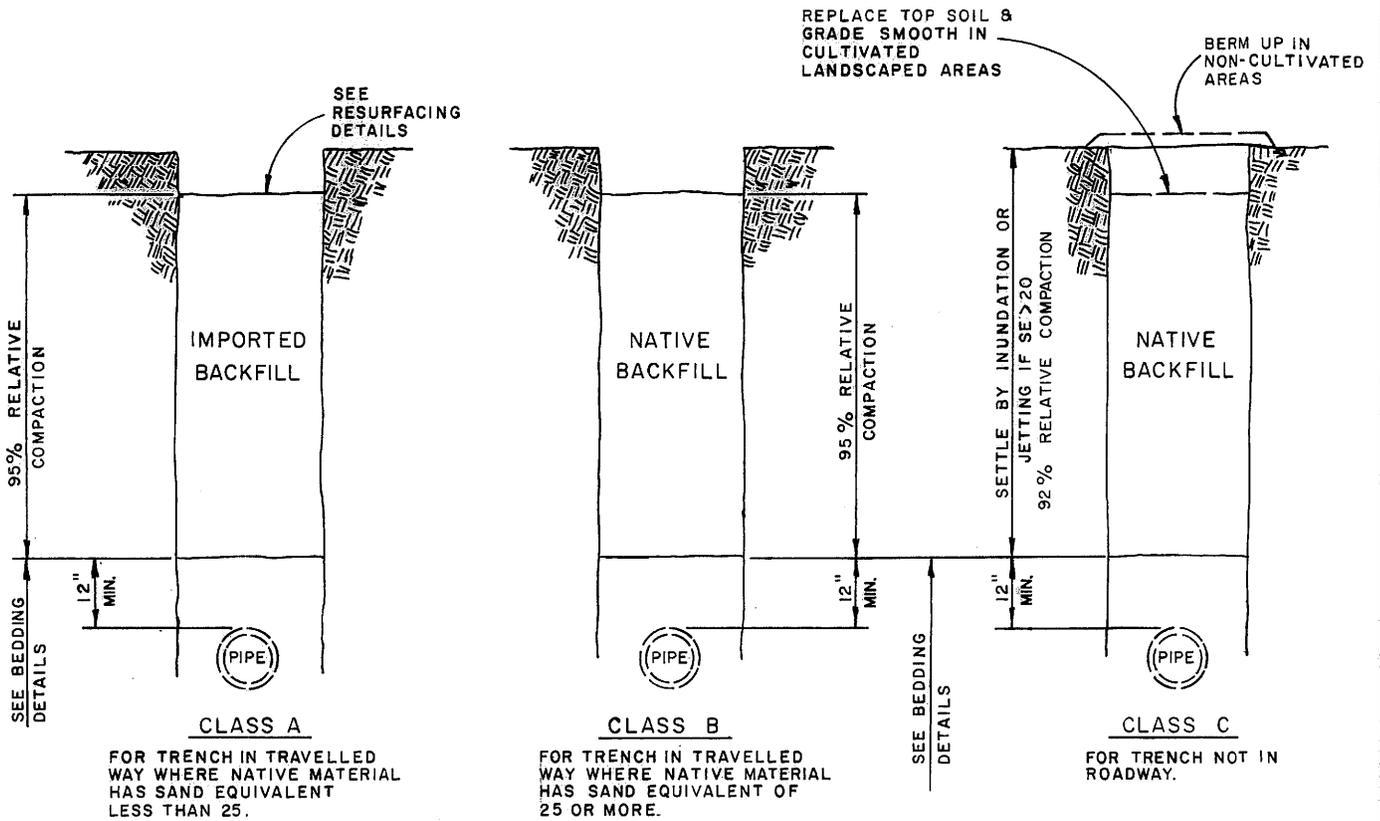
APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
 STANDARD NO G2**

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Pella 18036
 CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 SURVEY MONUMENT**

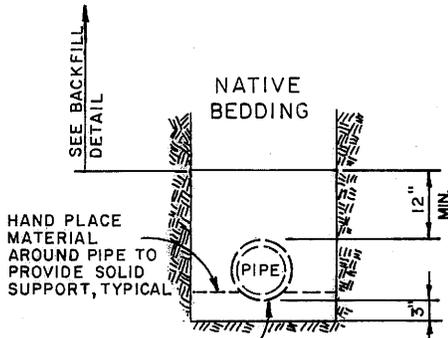
DWG. NO.
2



BACKFILL DETAILS

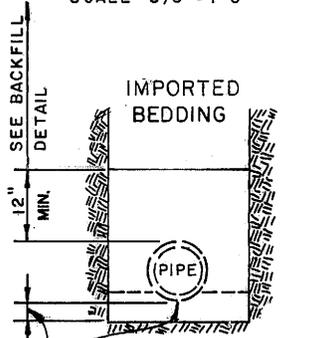
SCALE: 3/8" = 1'-0"

NOTE :
JETTING OF PIPE SHADING AND BEDDING SHALL NOT BE PERMITTED TYPICAL

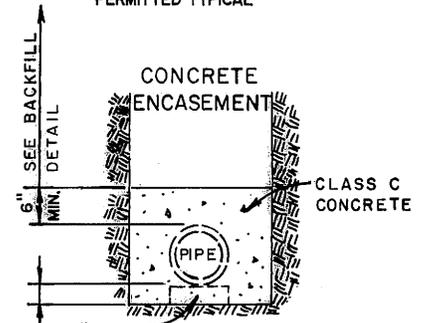


SMOOTH FIRM BASE UNDER PIPE BARREL EXCAVATE HOLES FOR BELLS OR COLLARS.

3" MIN. STD. THICKNESS IMPORTED BEDDING, GREATER THICKNESS MAY BE ORDERED BY ENGINEER.



SMOOTH FIRM BASE UNDER PIPE BARREL, EXCAVATE HOLES FOR BELLS OR COLLARS



SUPPORT PIPE ON CONCRETE BLOCKS, GROUT PADS, OR OTHER APPROVED METHODS. TWO SUPPORTS FOR EACH JOINT OF PIPE. TAKE CARE NOT TO FLOAT PIPE WHILE POURING CONCRETE.

BEDDING DETAILS

SCALE: 3/8" = 1'-0"

NOTES :

1. IMPORT BEDDING MATERIAL SHALL BE CLEAN SAND, OR 3/4" MAXIMUM GRAVEL UNIFORMLY GRADED WITH A MINIMUM SAND EQUIVALENT OF 25, OR CLASS 2 AGGREGATE BASE.
2. IMPORTED BACKFILL SHALL BE CLEAN SAND OR STREAM GRAVEL WHICH IS REASONABLY WELL GRADED FROM COARSE TO FINE WITH A MAXIMUM SIZE OF 1-1/2" AND NOT LESS THAN 10% PASSING A NO. 4 MESH SCREEN AND A MINIMUM SAND EQUIVALENT OF 25, OR CLASS 2 AGGREGATE BASE.
3. ALL BEDDING AND BACKFILL SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
4. NATIVE BEDDING AND BACKFILL SHALL HAVE A SAND EQUIVALENT OF 25 OR GREATER, AND SHALL BE 3/4" MAXIMUM SIZE.
5. THE TRENCH WIDTH SHALL BE A MINIMUM OF THE PIPE O.D. + 12" AND A MAXIMUM OF THE PIPE O.D. + 24".

APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

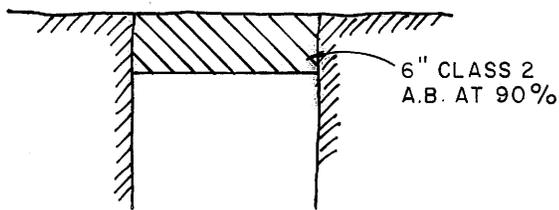
PUBLIC WORKS
STANDARD NO G3

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Pells 18036
CITY ENGINEER RCE NO.

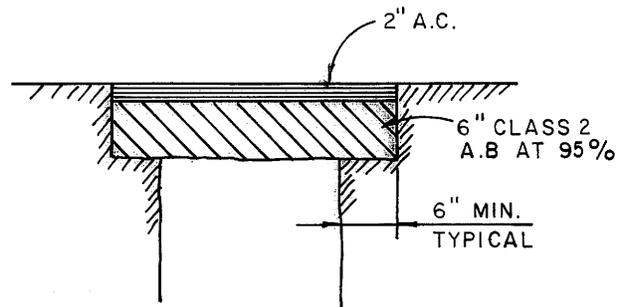
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TRENCH BEDDING AND BACKFILL

DWG. NO.

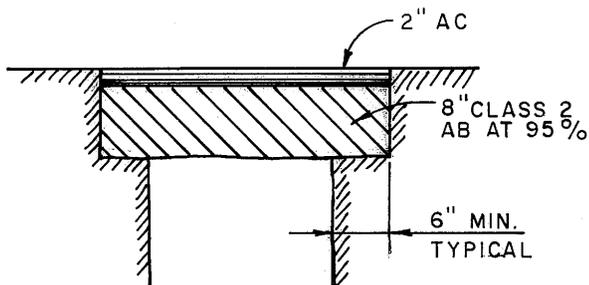
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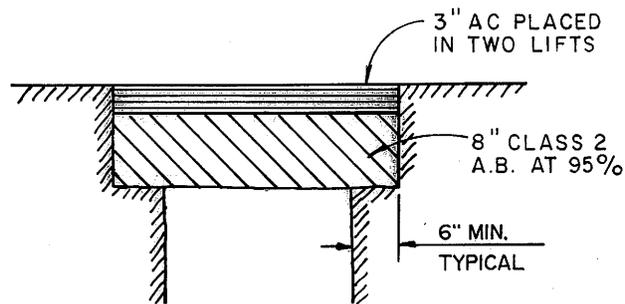
**UNPAVED
TRAVELLED WAYS**



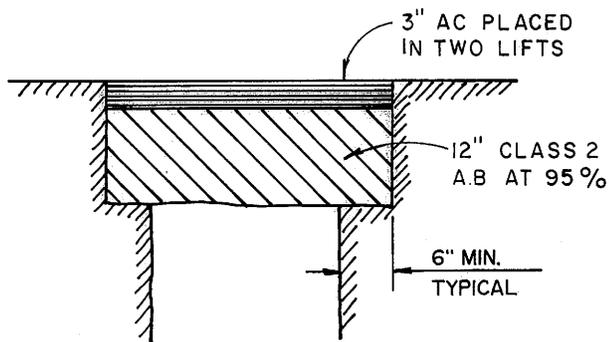
LOCAL STREETS



COLLECTOR STREETS



**COMMERCIAL AND
ARTERIAL STREETS**



INDUSTRIAL STREETS

NOTES:

1. EXISTING PAVEMENT SHALL BE NEATLY CUT TO A STRAIGHT VERTICAL LINE.
2. AGGREGATE BASE SHALL RECEIVE A "PRIME COAT" OF SC-250 LIQUID ASPHALT AND EXISTING PAVEMENT EDGES SHALL RECEIVE A "TACK COAT" OF SS-I ASPHALTIC EMULSION BEFORE PAVING.
3. ALL MATERIAL SHALL CONFORM TO THE CITY STANDARD SPECIFICATIONS.
4. ALL ASPHALT TRENCH PATCHES SHALL RECEIVE A FOG SEAL COAT OF SS-I ASPHALTIC EMULSION.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

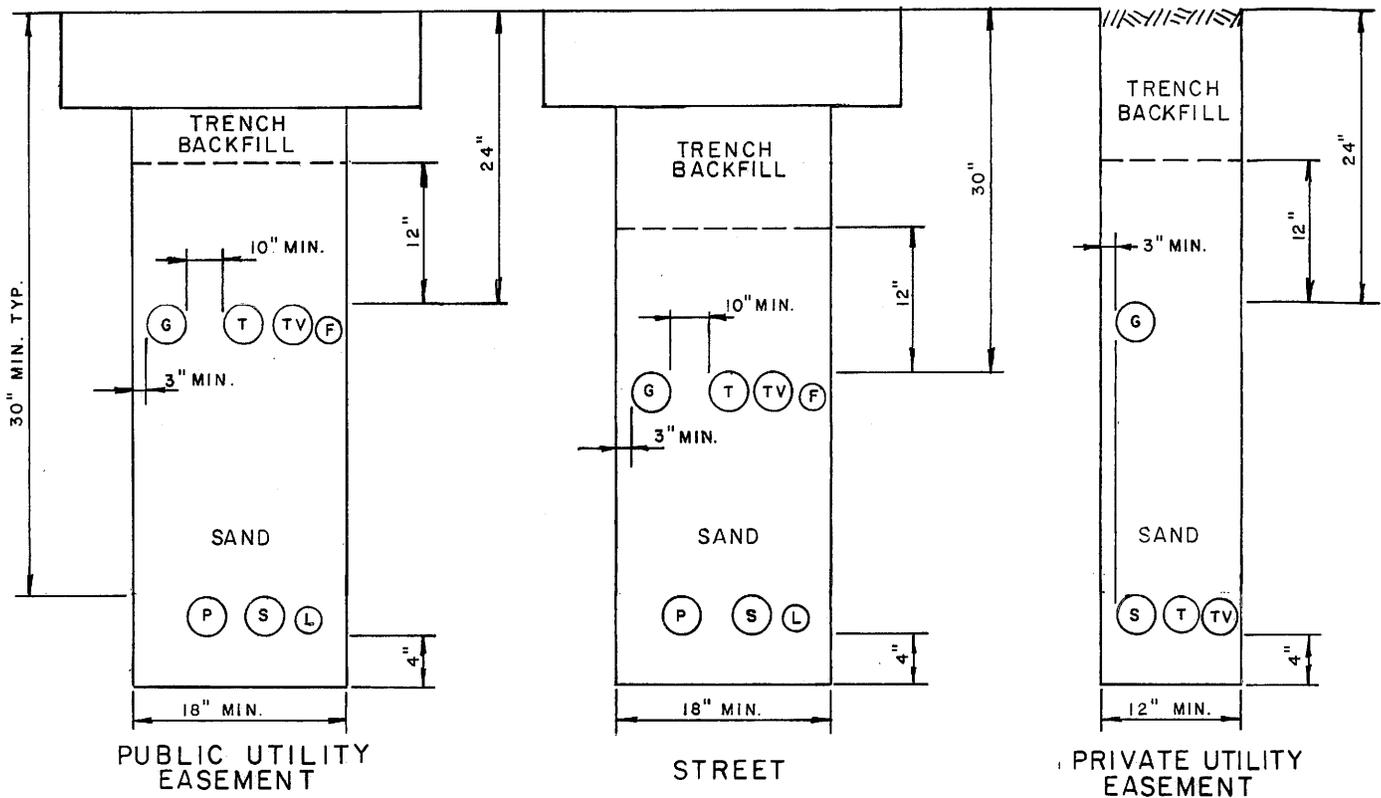
**PUBLIC WORKS
STANDARD NO G4**

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Pells 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TRENCH RESURFACING**

DWG. NO.

4



JOINT TRENCH INSTALLATIONS

LEGEND

- | | | |
|--------------------|----------------------|------------------------|
| (G) GAS (PG&E) | (TV) CABLE T.V. | (S) SECONDARY ELECTRIC |
| (T) TELEPHONE (PB) | (P) PRIMARY ELECTRIC | (F) FIRE ALARM |
| | | (L) STREET LIGHT |

NOTES

- BACKFILL IN PARKWAY OR STREET INSTALLATIONS SHALL BE CLASS A OR B AS REQUIRED BY THE PUBLIC WORKS DEPARTMENT.
- ALL ELECTRIC CONDUCTORS PLACED UNDERGROUND SHALL BE INSTALLED IN APPROVED ELECTRICAL CONDUIT:
 - PLASTIC CONDUIT SHALL BE NEMA TC-6 PVC (APPROVED FOR DIRECT BURIAL INSTALLATION)(P&C)
 - ALL CONDUITS INSTALLED SHALL INCLUDE PULL STRINGS.
- WHERE PRACTICAL, LOCATE GAS AND ELECTRIC SERVICES AT ALTERNATE LOT LINES TO MINIMIZE CONFLICTS.
- DEPTHS AND SEPARATION SHOWN ARE DESIRABLE MINIMUMS. VARIANCES MAY BE REQUIRED.
- GAS FACILITIES MUST ADHERE TO G0112A
 - WHERE 10" SEPARATION CANNOT BE OBTAINED IN AN 18" WIDE TRENCH SEPARATION MAY BE REDUCED TO NOT LESS THAN 6" INSTEAD OF INCREASING THE TRENCH WIDTH
 - WHERE PRIMARY AND GAS ARE NOT INVOLVED SECONDARY MAY OCCUPY POSITION NORMALLY OCCUPIED BY GAS.
- AT NOTIME WILL SANITARY SEWER LINES BE ALLOWED IN TRENCH OCCUPIED BY PRIMARY OR SECONDARY.
- EACH UTILITY COMPANY MAY HAVE ONE OR MORE CONDUITS OR CONDUCTORS IN A TRENCH.
- DEPTHS TO VARY ACCORDING TO CONDUIT SIZES AND LATERAL INTERFERENCE.
- ALL CONDUCTORS OR CONDUITS SHALL HAVE 3" MINIMUM CLEARANCE FROM TRENCH SIDEWALLS.

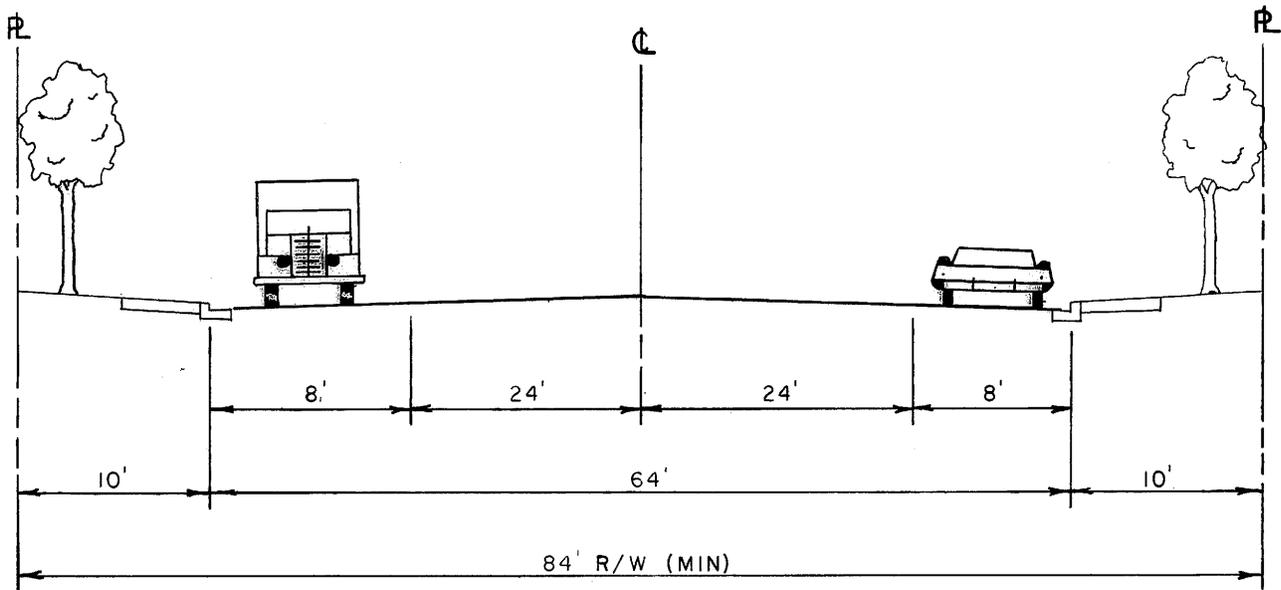
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
STANDARD NO G5**

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rhee 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
JOINT UTILITY TRENCH**

DWG. NO.
5



SYMMETRICAL ABOUT CENTER LINE

DEFINITION: ————— A STREET THAT SERVES A LARGE VOLUME OF VEHICULAR TRAFFIC WITH INTERSECTIONS AT GRADE AND GENERALLY HAVING DIRECT ACCESS TO ABUTTING PROPERTY, AND ON WHICH GEOMETRIC DESIGN AND TRAFFIC CONTROL MEASURES ARE USED TO EXPEDITE THE SAFE MOVEMENT OF THROUGH TRAFFIC.

ACCESS: ————— INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.

TRAFFIC FEATURES: ————— CHANNELIZATION USED TO CONTROL TURNING MOVEMENTS AT INTERSECTIONS AND AT CRITICAL DRIVEWAYS. TRAFFIC SIGNALS AT MAJOR INTERSECTIONS. PARKING AND DRIVEWAYS RESTRICTED AS NECESSARY.

STRUCTURAL DESIGN SECTION
(MINIMUM)

AGGREGATE BASE — 0.67'
PRIME COAT — 0.10 - 0.20 GAL./SQ. YD.
ASPHALT CONCRETE — 0.25'
FOG SEAL — 0.10 GAL./SQ. YD.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO S I

DES: _____ DWN: _____ L.R.W. _____

CHK: _____ DATE: _____

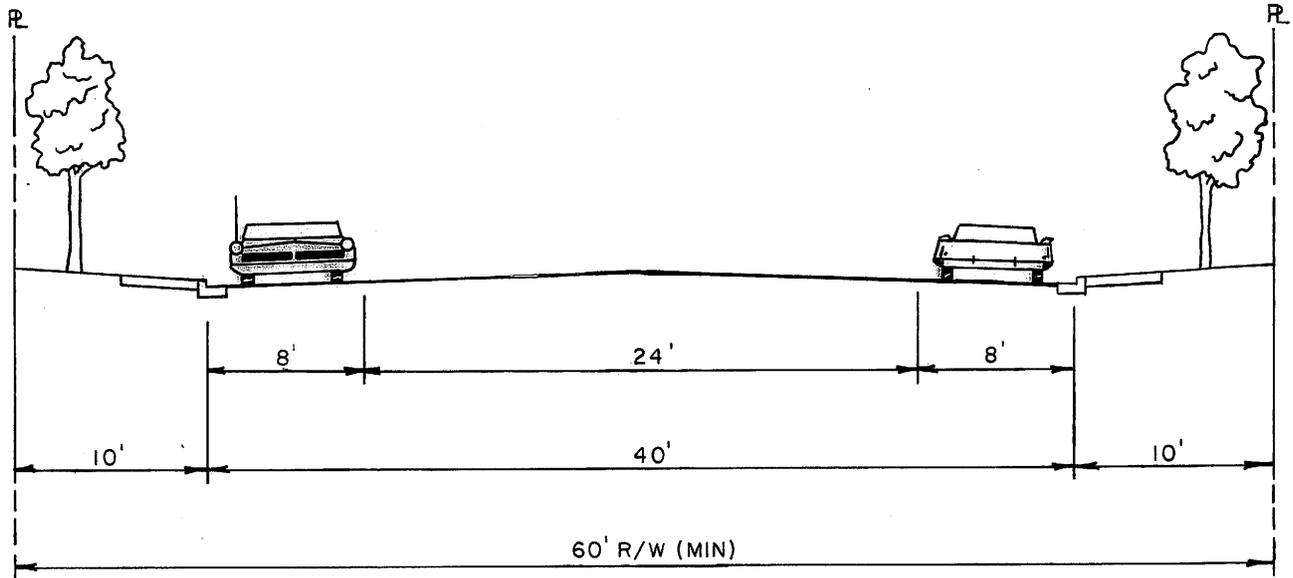
APPROVED:

Kay D. Pollock
CITY ENGINEER RCE NO. 18036

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
ARTERIAL STREET

DWG. NO.

6



DEFINITION: A STREET THAT SERVES ABUTTING PROPERTY AND CARRIES TRAFFIC TO THE ARTERIALS.

ACCESS: INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.

TRAFFIC FEATURES: TRAFFIC SIGNALS, PARKING RESTRICTION AND OTHER CONTROL MEASURES AS WARRANTED.

**STRUCTURAL DESIGN SECTION
(MINIMUM)**

- AGGREGATE BASE — 0.50'
- PRIME COAT — 0.10 - 0.20 GAL./SQ. YD.
- ASPHALT CONCRETE — 0.17'
- FOG SEAL — 0.10 GAL./SQ. YD.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
STANDARD NO S2**

DES: _____ DWN: L.R.W.

CHK: _____ DATE: _____

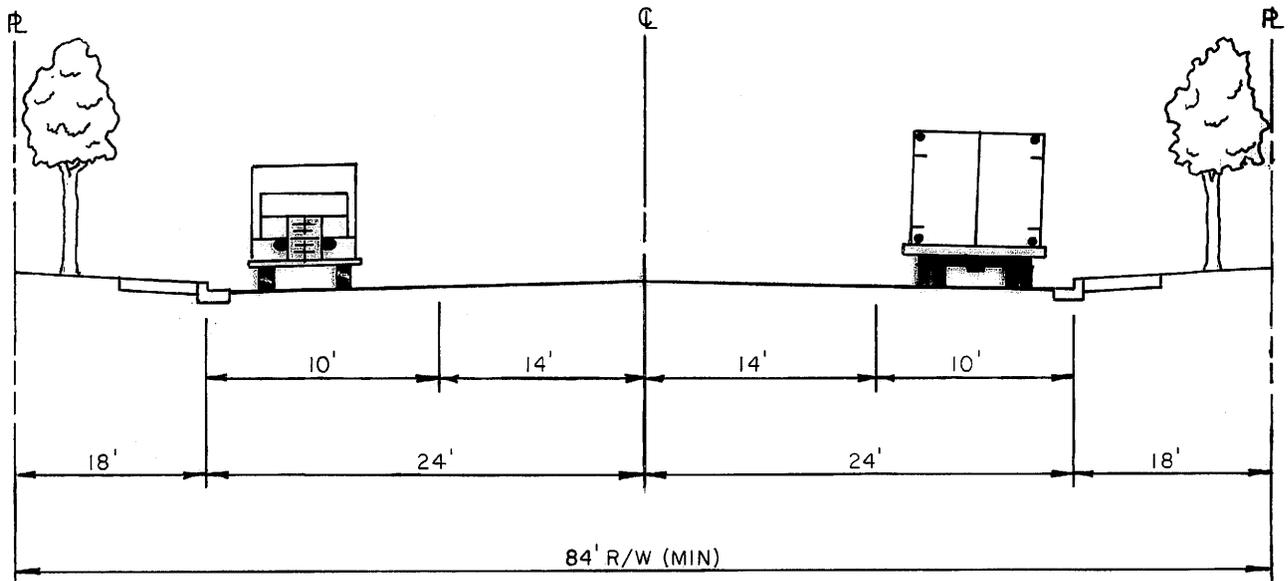
APPROVED:
Ray D. Pella 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS**

LOCAL AND COLLECTOR STREET

DWG. NO.

7



SYMMETRICAL ABOUT CENTER LINE

DEFINITION: ————— A STREET SERVING TRAFFIC WITHIN AN INDUSTRIAL DEVELOPMENT.

ACCESS: ————— INTERSECTIONS AT GRADE WITH DIRECT ACCESS TO ABUTTING PROPERTY.

TRAFFIC FEATURES: ——— TRAFFIC CONTROLS AND PARKING RESTRICTIONS AS WARRANTED.

STRUCTURAL DESIGN SECTION
(MINIMUM)

- AGGREGATE BASE — 0.67'
- PRIME COAT — 0.10 - 0.20 GAL./SQ. YD.
- ASPHALT CONCRETE — 0.25'
- FOG SEAL — 0.10 GAL./SQ. YD.

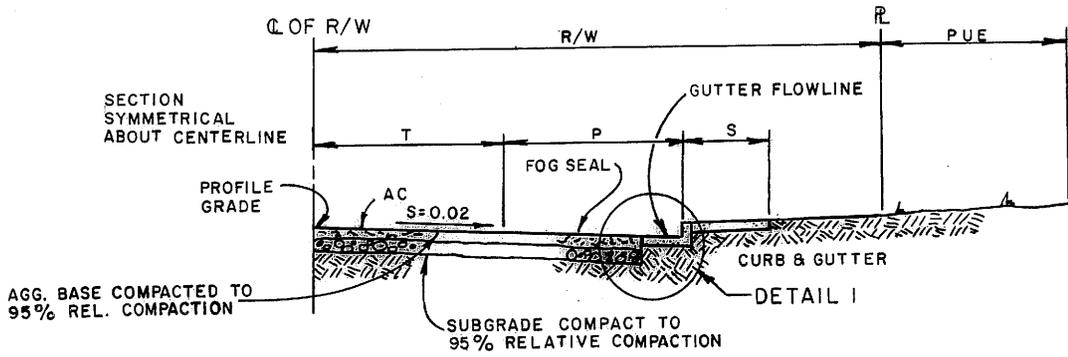
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO S3

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. P... 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
INDUSTRIAL STREET

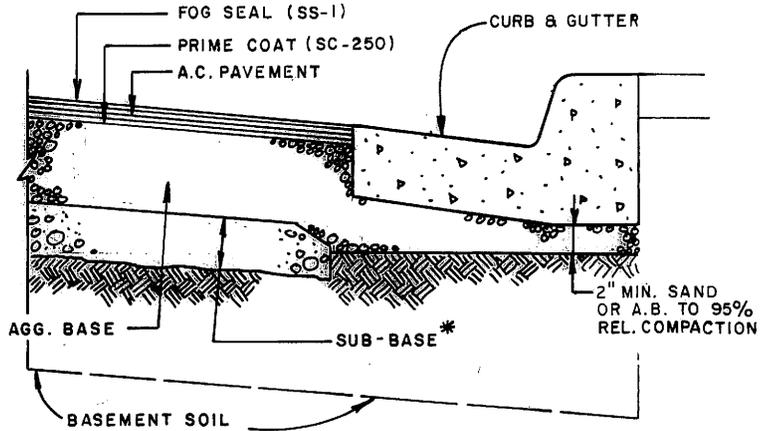
DWG. NO.
8



TYPICAL SECTION

SCALE: 1" = 10'

* SUB-BASE REQUIRED IF R-VALUE OF SUBGRADE SOIL IS LESS THAN VALUE SHOWN. THICKNESS TO BE DETERMINED BY THE DESIGN ENGINEER AND APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.



DETAIL I

SCALE: 3/4" = 1'-0"

CROSS SECTION WIDTH & THICKNESS

TYPE OF STREET	R/W	T	P	S	A.C.(MIN.)	A.B.(MIN)	T. I.	R VALUE (MIN.)
LOCAL-RESIDENTIAL	60'	12'	8'	4.5'	0.17'	0.50'	4	23
COLLECTOR	60'	12'	8'	4.5'	0.17'	0.67'	5	27
ARTERIAL	84'	24'	8'	4.5'	0.25'	0.67'	5.5	22
COMMERCIAL	84'	12'	10'	4.5' OR 10'	0.25'	0.67'	6	31
INDUSTRIAL	84'	14'	10'	4.5'	0.25'	1.00'	7.5	33

LEGEND

- R/W—RIGHT OF WAY. INCREASE IN "P" OR "T" FROM THE VALUES GIVEN IN THE ABOVE TABLE WILL REQUIRE A CORRESPONDING INCREASE IN R/W LESS THAN 84'.
- T—TRAVELED WAY. ON OTHER THAN LOCAL STREETS, TRAFFIC VOLUME MAY DICTATE ADDITION OF A 16' MEDIAN &/OR 12 LANES.
- P—PARKING LANE. SHOULD A BIKE LANE BE REQUIRED, PARKING WILL BE PROHIBITED.
- S—SIDEWALK. A 9.5' SIDEWALK WILL BE REQUIRED ON COMMERCIAL STREETS DESIGNATED BY THE DEPT. OF PUBLIC WORKS AS "PEDESTRIAN ORIENTED."
- PUE—PUBLIC UTILITY EASEMENT. 10' WIDE OR AS DETERMINED BY THE DEPT. OF PUBLIC WORKS.
- AC./A.B.—MINIMUM THICKNESSES SHOWN ARE REQUIRED WITHOUT SUB-BASE FOR SUBGRADES WITH AN R-VALUE EQUAL TO OR GREATER THAN THE VALUE SHOWN.
- T.I.—TRAFFIC INDEX. CONSTANT USED IN THE DESIGN OF FLEXIBLE PAVEMENTS BASED ON THE ESTIMATED VOLUME OF TRUCK TRAFFIC (ESAL PER CALTRANS DESIGN MANUAL).

APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

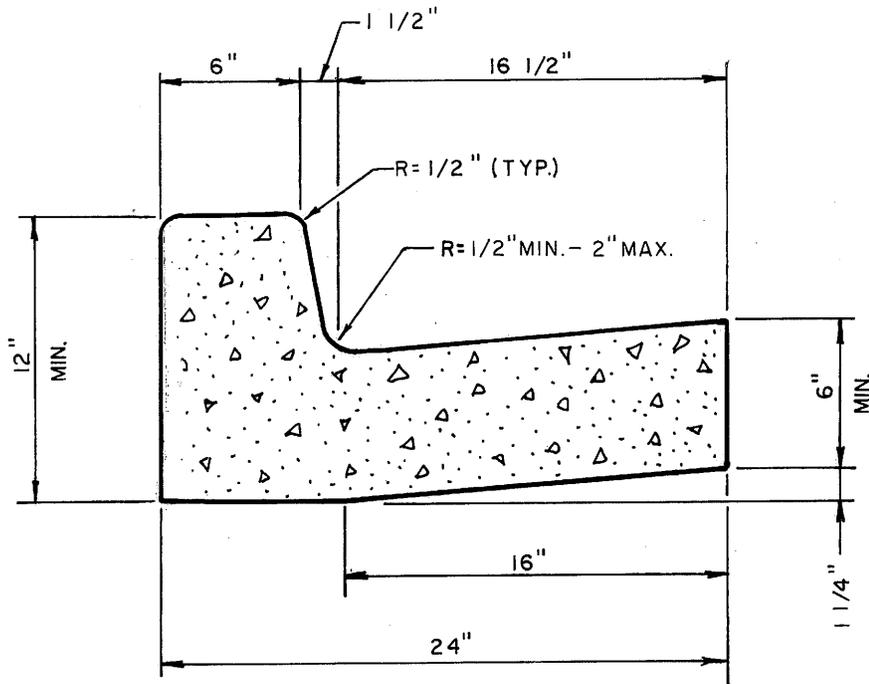
**PUBLIC WORKS
 STANDARD NO S4**

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray R. Kelly 18036
 CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 STANDARD STREET SECTIONS**

DWG. NO.

9



NOTES:

1. CROSS SECTIONAL AREA 1.29 SQUARE FEET.
2. 20.9 LF, PER CUBIC YARD OF CONCRETE.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. AN APPROXIMATE 4-INCH, FLOW LINE SHALL BE LEFT SMOOTH TROWELED.
5. ALL BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
6. 1/2 INCH, PRE MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE BC AND EC OF ALL CURB RETURNS AND AT THE END OF ALL DRIVEWAYS, SHALL BE FULL-DEPTH AND COMPLETELY FILL THE JOINT. A DEEP SCORE LINE SHALL BE PLACED PERPENDICULAR TO THE BACK OF CURB AT THE MIDPOINT BETWEEN EXPANSION JOINTS.
7. ALL WORK TO BE DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
8. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE CURB AND COMPACTED TO 95% REL. DENSITY.
9. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
10. CONTRACTOR SHALL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

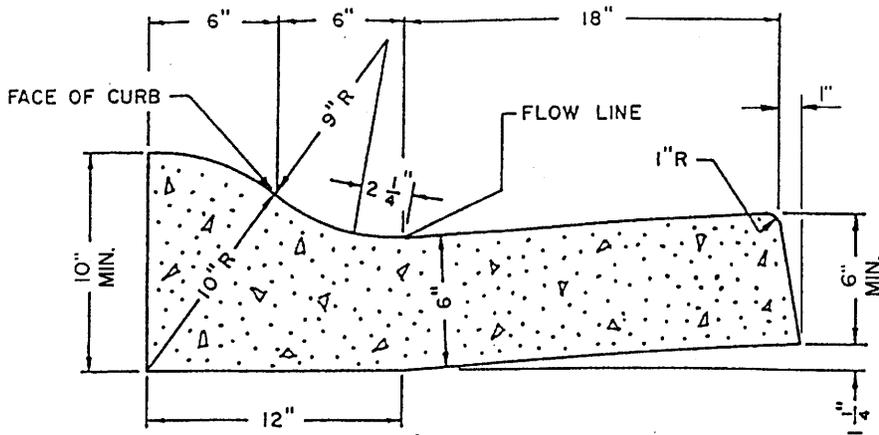
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO S5

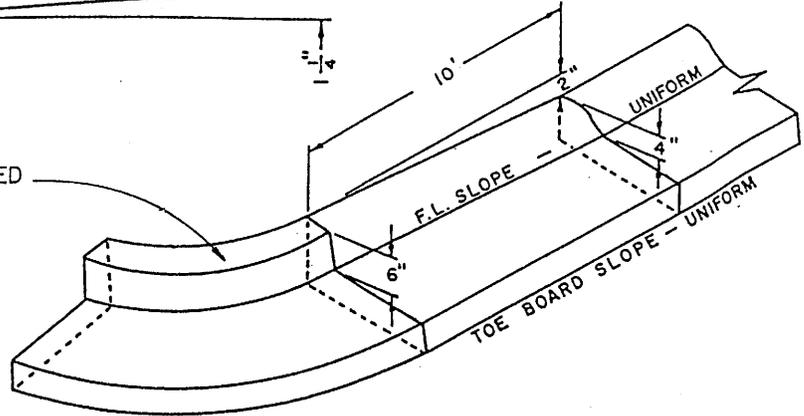
DES: _____ DWN: L.R.W.
CHK: _____ DATE: 11/95
APPROVED:
Ray D. Rice 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD 6" CURB
AND GUTTER

DWG. NO.
10



NOTE:
 30" OVERALL WIDTH
 VERTICAL CURB AND GUTTER TO BE USED
 AT ALL CURB RETURNS.
 EXPANSION JOINT AT BOTH ENDS AND
 MIDPOINT OF CURB RETURNS.



TRANSITION FROM ROLLED CURB
 AND GUTTER TO VERTICAL CURB
 AND GUTTER AT CURB RETURNS

NOTES:

1. CROSS SECTIONAL AREA 1.44 SQUARE FEET.
2. 18.7 L.F. PER CUBIC YARD OF CONCRETE.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. AN APPROXIMATE 4-INCH FLOW LINE SHALL BE LEFT SMOOTH TROWELED.
5. ALL BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
6. 1/2 INCH, PRE-MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE B.C. AND E.C. OF ALL CURB RETURNS AND AT THE END OF ALL DRIVEWAYS, SHALL BE FULL-DEPTH AND COMPLETELY FILL THE JOINT. A DEEP SCORE LINE SHALL BE PLACED PERPENDICULAR TO THE BACK OF CURB AT THE MIDPOINT BETWEEN EXPANSION JOINTS.
7. ALL WORK DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
8. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE CURB, AND COMPACTED TO 95% REL. DENSITY.
9. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF 0.5 POUND PER CUBIC YARD.
10. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

APPROVED BY CITY COUNCIL
 RESOLUTION NO. 58
 DATE: 12/5/94

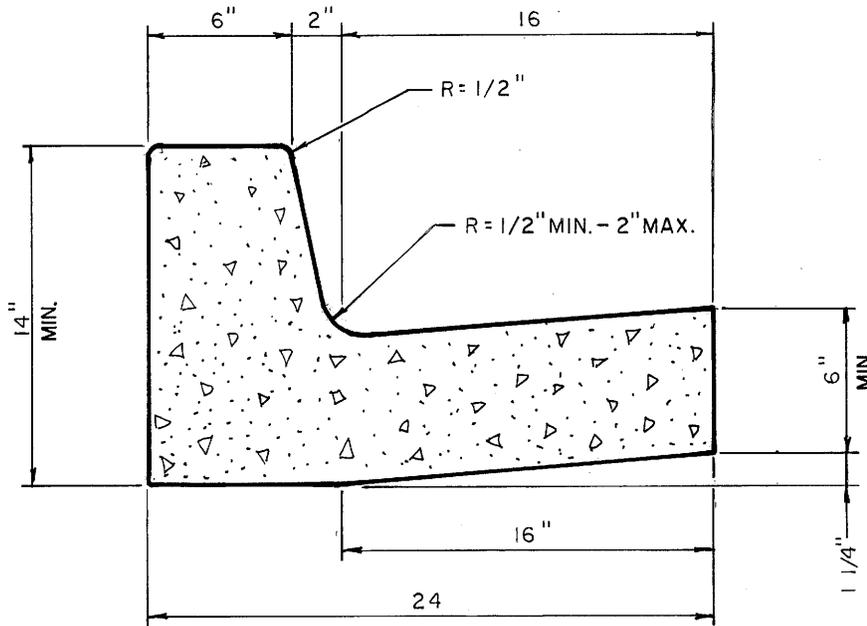
PUBLIC WORKS
 STANDARD NO. S5A

DES: R.D.R. DRWN: D.V.
 CHK: R.D.R. DATE: 11 / 95
 APPROVED:

 CITY ENGINEER 18036
 RCE NO.

CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 STANDARD ROLLED CURB
 AND GUTTER

DWG. NO.
 10 A



NOTES:

1. CROSS SECTIONAL AREA 1.39 SQUARE FEET.
2. 19 LF PER CUBIC YARD OF CONCRETE.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. AN APPROXIMATE 4 INCH FLOWLINE SHALL BE LEFT SMOOTH TROWELED.
5. ALL BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
6. 1/2 INCH PRE-MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE BC AND EC OF ALL CURB RETURNS, AND AT THE END OF ALL DRIVEWAYS, SHALL BE FULL-DEPTH AND COMPLETELY FILL THE JOINT. A DEEP SCORE LINE SHALL BE PLACED PERPENDICULAR TO THE BACK OF CURB AT THE MIDPOINT BETWEEN EXPANSION JOINTS.
7. ALL WORK TO BE DONE, AND ALL MATERIALS SUPPLIED, SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
8. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE CURB AND COMPACTED TO 95% REL. DENSITY.
9. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
10. CONTRACTOR SHALL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

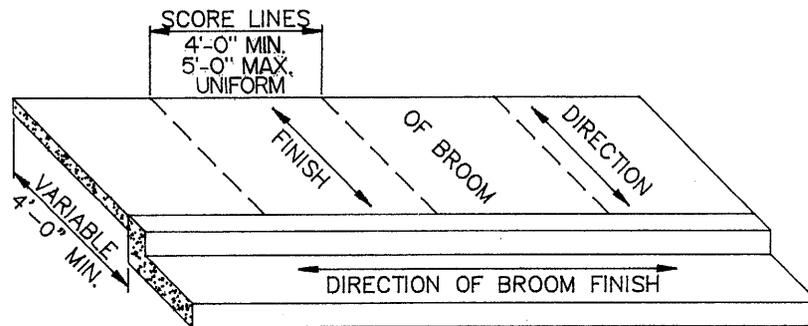
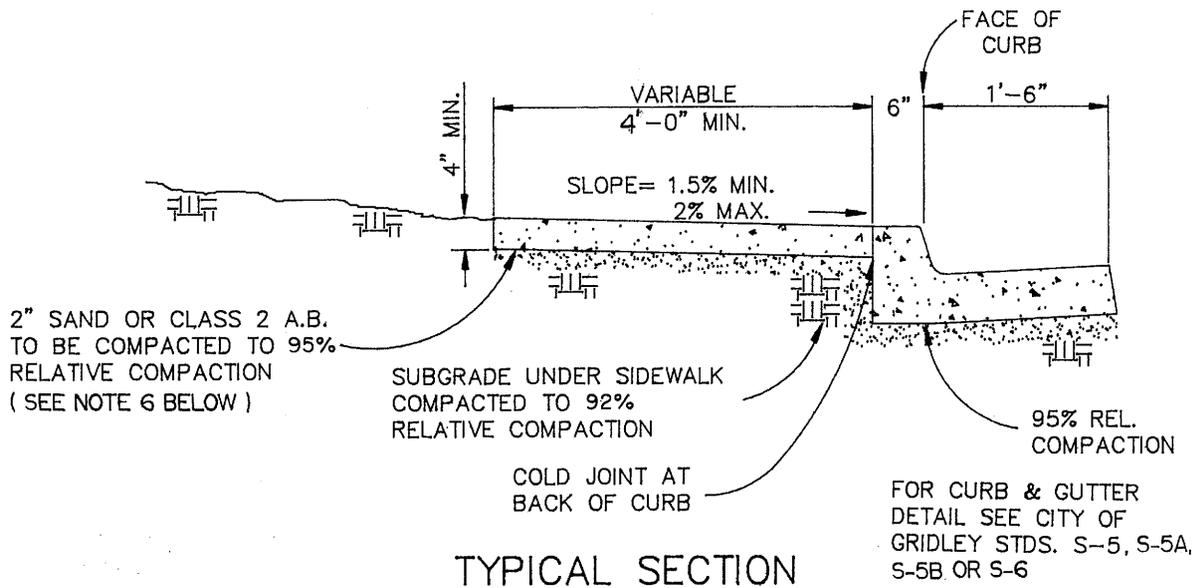
PUBLIC WORKS
STANDARD NO S6

DES: _____ DWN: LRW
CHK: _____ DATE: 11 / 95
APPROVED:
Ray D. Pells 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD 8" CURB
AND GUTTER

DWG. NO.

11



NOTES:

1. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF 0.5 POUND PER CUBIC YARD.
2. 1/2 INCH, PRE-MOLDED JOINT FILLER SHALL BE INSTALLED IN EXPANSION JOINTS AT REGULAR INTERVALS NOT EXCEEDING 20 FEET, AT THE B.C. AND E.C. OF ALL CURB RETURNS AND AT THE END OF ALL DRIVEWAYS, SHALL BE FULL-DEPTH AND COMPLETELY FILL THE JOINT.
3. A MINIMUM OF 2 INCHES OF SAND, OR CLASS 2 AGGREGATE BASE, TO BE PLACED UNDER THE SIDEWALK. (SEE NOTE 6 BELOW)
4. ALL WORK DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
5. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.
6. FOR SIDEWALK ABUTTING ROLLED CURB AND GUTTER, THE THICKNESS OF AGGREGATE BASE UNDER THE SIDEWALK SHALL BE THE SAME AS THE THICKNESS PLACED UNDER THE STREET PAVEMENT.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 58
DATE: 12/5/94

PUBLIC WORKS
STANDARD NO. S7

DES: R.D.R. DRWN: D.V.
CHK: R.D.R. DATE: 11/95
APPROVED:
Ray D. Kell
CITY ENGINEER 18036
RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD SIDEWALK

DWG. NO.

12

NOTES:

1. ALL WORK TO BE DONE AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY MIXED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. TOP OF LIP AT FLOWLINE TO BE TROWELED STRAIGHT AND TRUE.
6. EXPANSION JOINTS SHALL BE CONSTRUCTED ON ϕ OF ALL DRIVEWAYS 25 FEET OR MORE IN WIDTH.
7. WHERE CURB IS EXISTING AND NO DEPRESSION HAS BEEN PROVIDED, CURB SHALL BE REMOVED TO THE FIRST EXPANSION JOINT BEYOND EITHER SIDE.
8. DRIVEWAYS SHALL NOT BE CONSTRUCTED CLOSER THAN 20 FEET TO STREET CURB RETURNS UNLESS APPROVED BY THE ENGINEER.
9. ALLEY CURB RETURN MAY BE DEPRESSED AS PART OF THE DRIVEWAY ONLY WHEN APPROVED BY THE ENGINEER.
10. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON THE SAME LOT SHALL BE 24 FEET.
11. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON ADJACENT LOTS SHALL BE 6 FEET.
12. WHERE AN EXISTING SIDEWALK IS IN PLACE, IT SHALL BE REMOVED TO THE FIRST EXPANSION JOINT BEYOND EITHER SIDE.

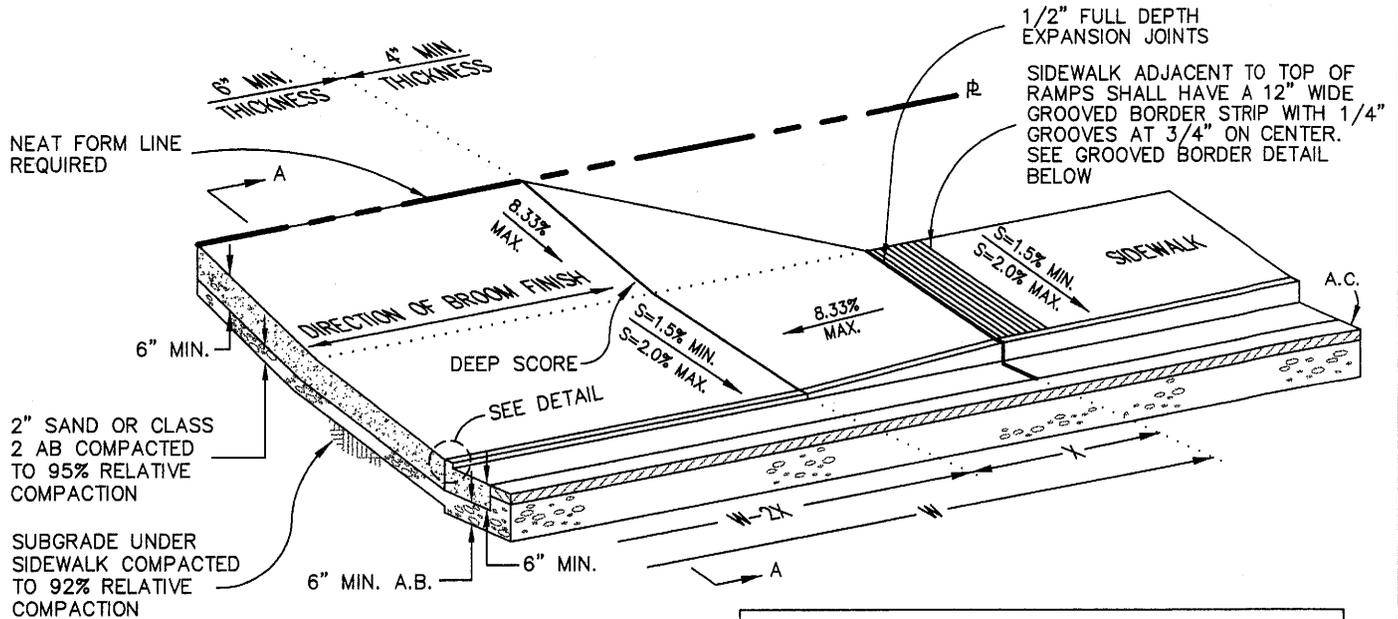
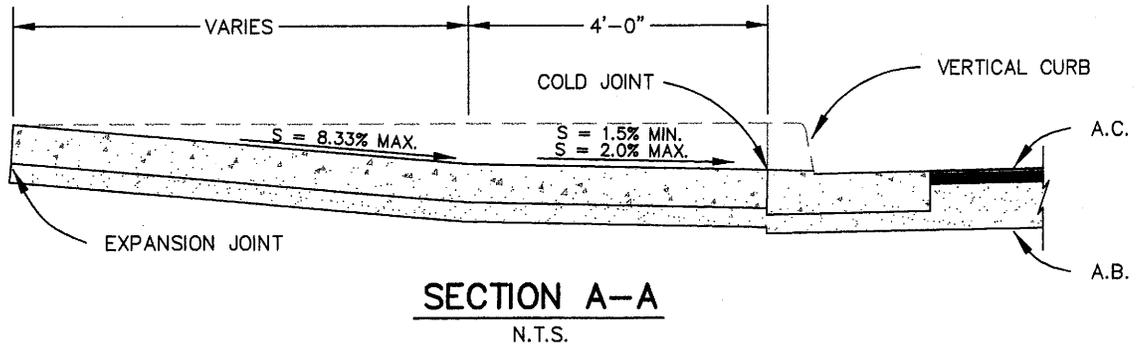
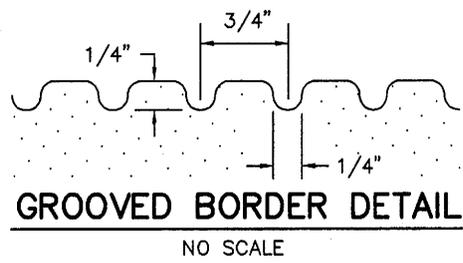
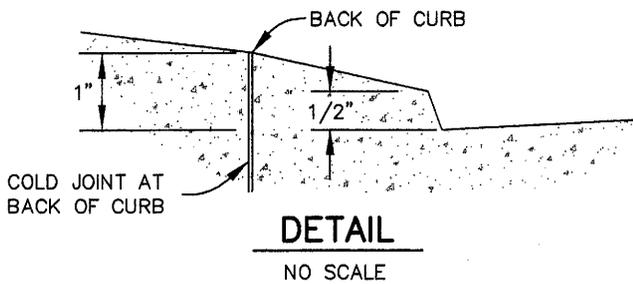


TABLE OF DIMENSIONS			
CURB FACE	X DIST	W MIN.	W-2X MIN.
6"	5'-0"	22'	12'
8"	7'-0"	26'	12'



APPROVED BY CITY COUNCIL
 RESOLUTION NO. 2004-R-028
 DATE: JULY 6, 2004

**PUBLIC WORKS
 STANDARD NO. S8**

DES: P.W.R. DRWN: P.W.R.
 CHK: H.L.V. DATE: JUNE 2004
 APPROVED:
Ernie A. Nantz 33381
 CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 STANDARD RESIDENTIAL DRIVEWAY
 (CONTIGUOUS SIDEWALK)**

DWG. NO.
13

NOTES:

1. ALL WORK TO BE DONE AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY MIXED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. TOP OF LIP AT FLOWLINE TO BE TROWELED STRAIGHT AND TRUE.
6. EXPANSION JOINTS SHALL BE CONSTRUCTED ON ϕ OF ALL DRIVEWAYS 25 FEET OR MORE IN WIDTH.
7. WHERE CURB IS EXISTING AND NO DEPRESSION HAS BEEN PROVIDED, CURB SHALL BE REMOVED TO THE FIRST EXPANSION JOINT BEYOND EITHER SIDE.
8. DRIVEWAYS SHALL NOT BE CONSTRUCTED CLOSER THAN 20 FEET TO STREET CURB RETURNS UNLESS APPROVED BY THE ENGINEER.
9. ALLEY CURB RETURN MAY BE DEPRESSED AS PART OF THE DRIVEWAY ONLY WHEN APPROVED BY THE ENGINEER.
10. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON THE SAME LOT SHALL BE 24 FEET.
11. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON ADJACENT LOTS SHALL BE 6 FEET.
12. WHERE AN EXISTING SIDEWALK IS IN PLACE, IT SHALL BE REMOVED TO THE FIRST EXPANSION JOINT BEYOND EITHER SIDE.

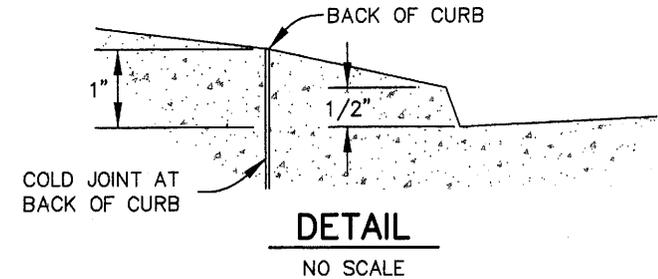
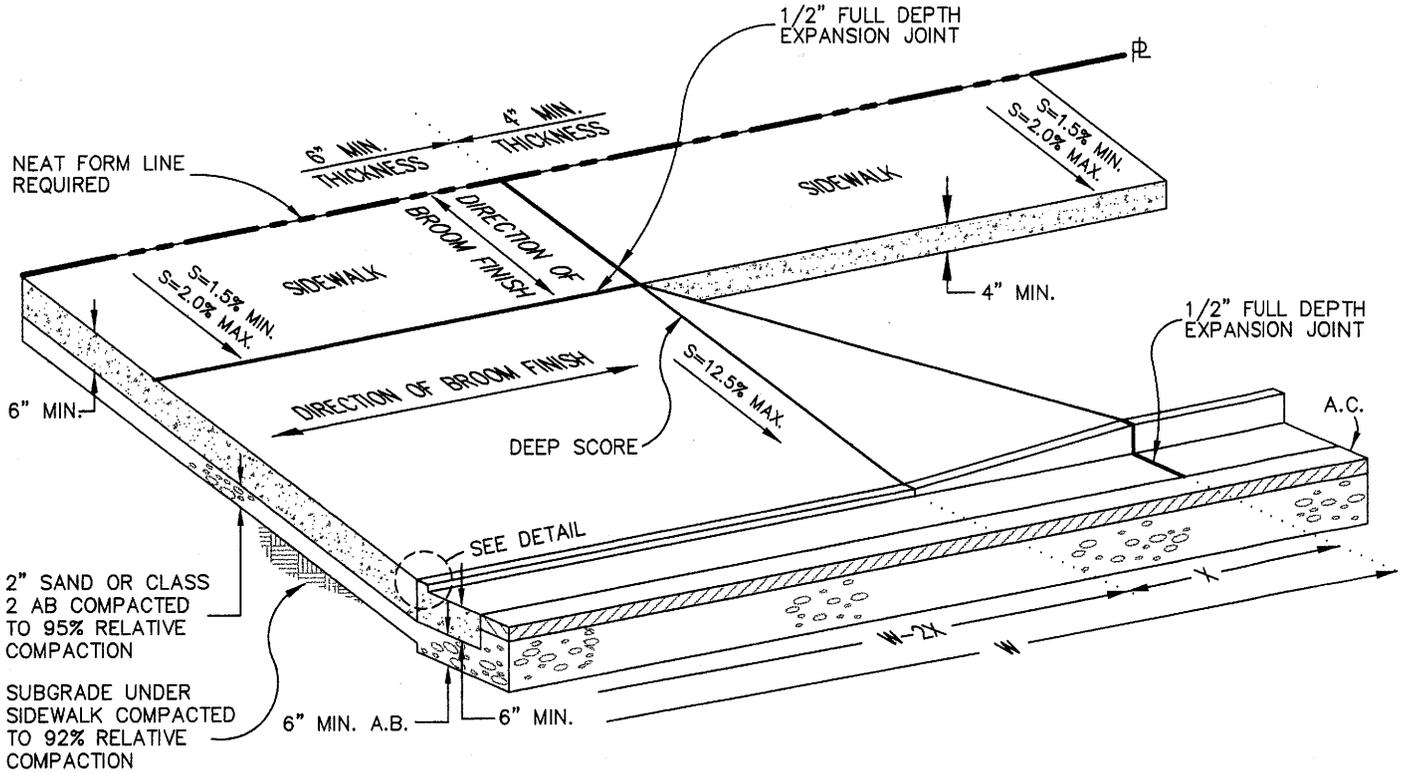


TABLE OF DIMENSIONS			
CURB FACE	X DIST	W MIN.	W-2X MIN.
6"	4'-0"	19'	12'
8"	5'-0"	22'	12'
10"	6'-0"	24'	12'
12"	7'-0"	26'	12'

APPROVED BY CITY COUNCIL
 RESOLUTION NO. 2004-R-028
 DATE: JULY 6, 2004

**PUBLIC WORKS
 STANDARD NO.**

S8A

DES: P.W.R. DRWN: P.W.R.
 CHK: H.L.V. DATE: JUNE 2004
 APPROVED:
Bruce A. Nault 33381
 CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS**

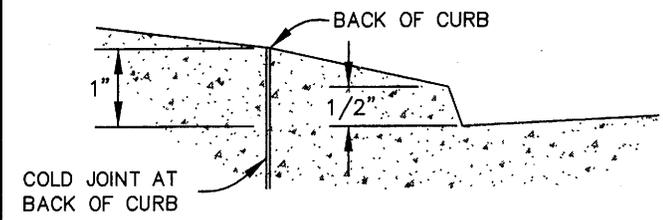
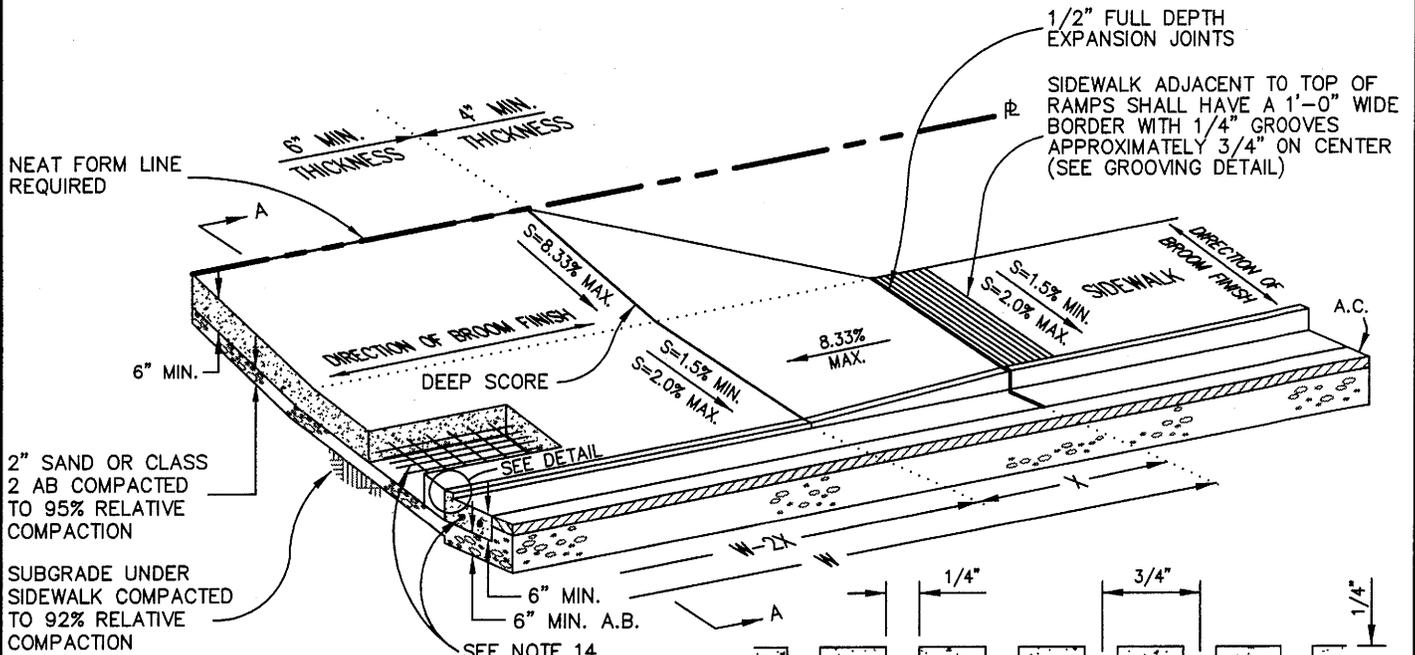
**STANDARD RESIDENTIAL DRIVEWAY
 (SEPARATED SIDEWALK)**

DWG. NO.

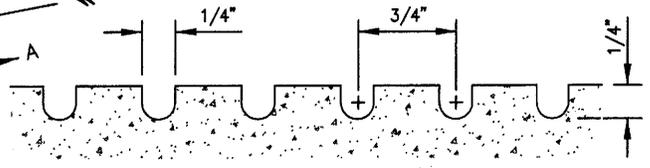
13A

NOTES:

1. ALL WORK TO BE DONE AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. WHERE CURB IS EXISTING AND NO DEPRESSION HAS BEEN PROVIDED, CURB SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT BEYOND EITHER SIDE.
6. DRIVEWAYS SHALL NOT BE CONSTRUCTED CLOSER THAN 20 FEET TO STREET CURB RETURNS UNLESS APPROVED BY THE ENGINEER.
7. MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON THE SAME LOT SHALL BE 24 FEET.
8. WHERE AN EXISTING SIDEWALK IS IN PLACE AND IS LESS THAN THE REQUIRED THICKNESS, THAT PORTION OF SUCH SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT BEYOND EITHER SIDE.
9. THE TOTAL LENGTH OF DRIVEWAYS CONSTRUCTED ON ANY SINGLE BUSINESS FRONTAGE SHALL NOT EXCEED SIXTY(60) PERCENT OF SAID PROPERTY FRONTAGE UNLESS APPROVED BY THE ENGINEER.
10. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN ADJACENT LOTS SHALL BE 6 FEET.
11. EXPANSION JOINTS SHALL BE CONSTRUCTED ON ϕ OF DRIVEWAYS 25 FEET OR MORE IN WIDTH
12. DRIVEWAY WIDTH MAY BE INCREASED WHEN APPROVED BY THE ENGINEER.
13. TOP OF LIP AT FLOWLINE TO BE TROWELED STRAIGHT AND TRUE.
14. ALL DRIVEWAYS SHALL HAVE 2 NO. 4 REBARS 12" O.C. IN THE GUTTER AND 6" X 6" 10 GA. WIRE MESH THROUGHOUT THE APPROACH.

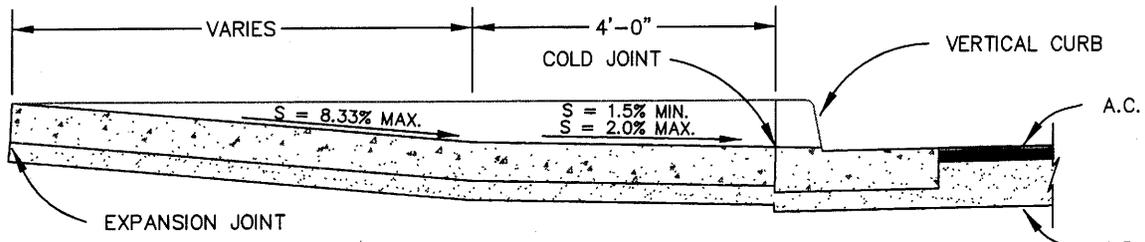


DETAIL
NO SCALE



GROOVING DETAIL
NO SCALE

TABLE OF DIMENSIONS			
CURB FACE	X DIST	W MAX.	W-2X MAX.
6"	5'-0"	45'	35'
8"	7'-0"	49'	35'
10"	9'-0"	53'	35'
12"	11'-0"	57'	35'



SECTION A-A
NO SCALE

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2008-R-055
DATE: AUGUST 18, 2008

**PUBLIC WORKS
STANDARD NO. S9**

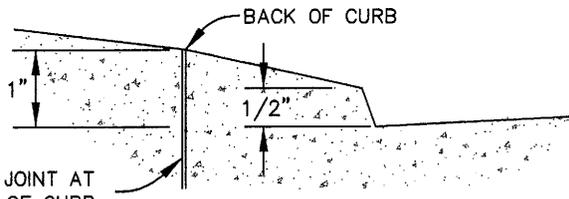
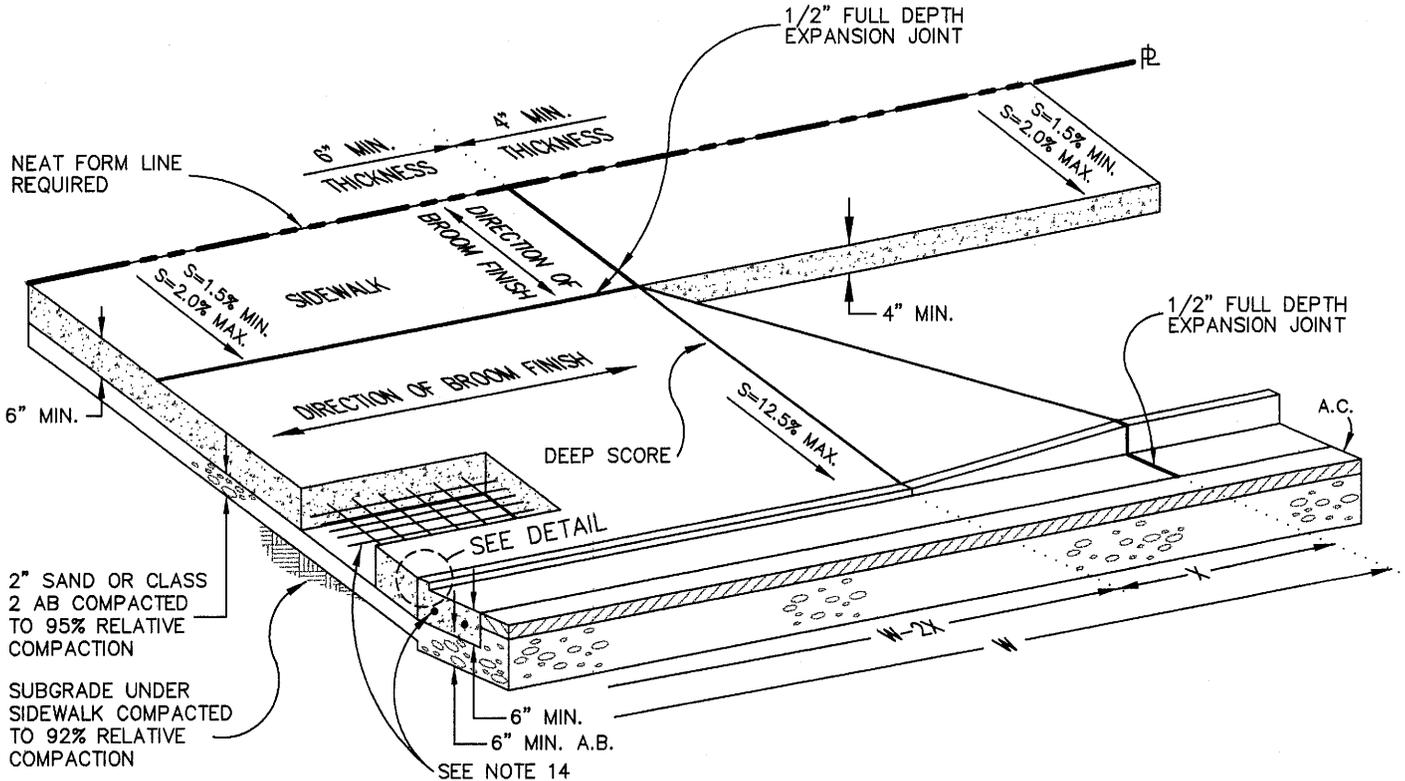
DES: H.L.V. DRWN: P.W.R.
CHK: B.A.N. DATE: JULY 2008
APPROVED:
Blair A. Nantz 33381
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD COMMERCIAL DRIVEWAY
(CONTIGUOUS SIDEWALK)**

DWG. NO.
14

NOTES:

1. ALL WORK TO BE DONE AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. WHERE CURB IS EXISTING AND NO DEPRESSION HAS BEEN PROVIDED, CURB SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT BEYOND EITHER SIDE.
6. DRIVEWAYS SHALL NOT BE CONSTRUCTED CLOSER THAN 20 FEET TO STREET CURB RETURNS UNLESS APPROVED BY THE ENGINEER.
7. MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN DRIVEWAYS ON THE SAME LOT SHALL BE 24 FEET.
8. WHERE AN EXISTING SIDEWALK IS IN PLACE AND IS LESS THAN THE REQUIRED THICKNESS, THAT PORTION OF SUCH SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT BEYOND EITHER SIDE.
9. THE TOTAL LENGTH OF DRIVEWAYS CONSTRUCTED ON ANY SINGLE BUSINESS FRONTAGE SHALL NOT EXCEED SIXTY(60) PERCENT OF SAID PROPERTY FRONTAGE UNLESS APPROVED BY THE ENGINEER.
10. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN ADJACENT LOTS SHALL BE 6 FEET.
11. EXPANSION JOINTS SHALL BE CONSTRUCTED ON ϕ OF DRIVEWAYS 25 FEET OR MORE IN WIDTH.
12. DRIVEWAY WIDTH MAY BE INCREASED WHEN APPROVED BY THE ENGINEER.
13. TOP OF LIP AT FLOWLINE TO BE TROWELED STRAIGHT AND TRUE.
14. ALL DRIVEWAYS SHALL HAVE 2 NO. 4 REBARS 12" O.C. IN THE GUTTER AND 6" X 6" 10 GA. WIRE MESH THROUGHOUT THE APPROACH.



DETAIL

NO SCALE

TABLE OF DIMENSIONS			
CURB FACE	X DIST	W MAX.	W-2X MAX.
6"	4'-0"	43'	35'
8"	5'-0"	45'	35'
10"	6'-0"	47'	35'
12"	7'-0"	49'	35'

APPROVED BY CITY COUNCIL
 RESOLUTION NO. 2004-R-028
 DATE: JULY 6, 2004

**PUBLIC WORKS
 STANDARD NO.**

S9A

DES: P.W.R. DRWN: P.W.R.
 CHK: H.L.V. DATE: JUNE 2004
 APPROVED:

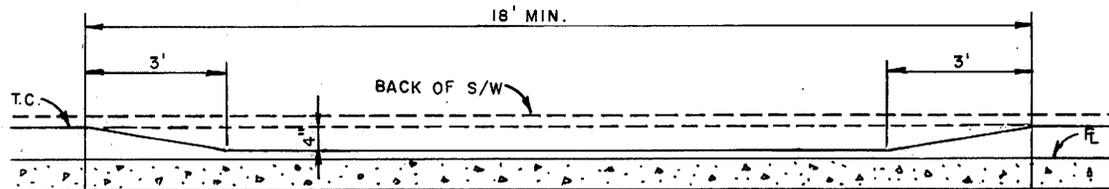
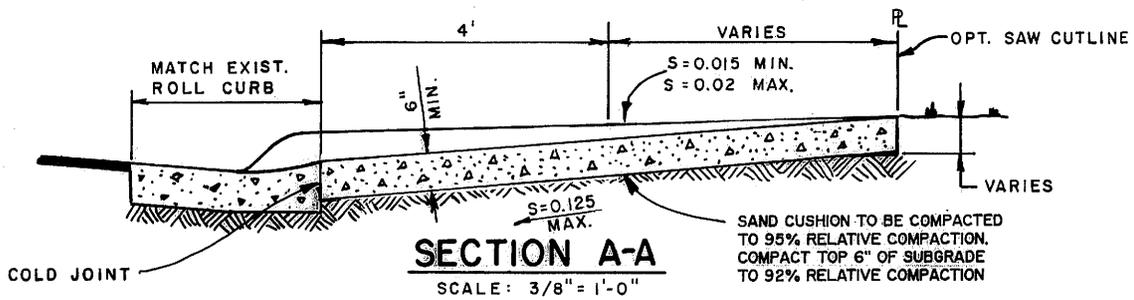
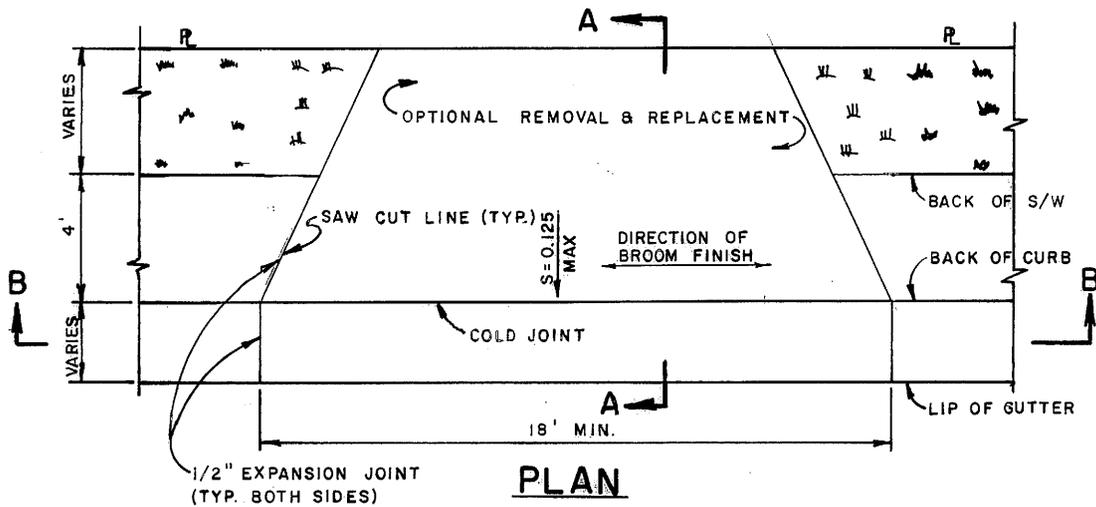
**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS**

DWG. NO.

**STANDARD COMMERCIAL DRIVEWAY
 (SEPARATED SIDEWALK)**

14A

Bruce A. Nally 33381
 CITY ENGINEER RCE NO.



NOTE:

1. SAW CUT CONCRETE CURB, GUTTER, SIDEWALK, AND DRIVEWAY OR REMOVE TO NEAREST EXPANSION JOINT.
2. ALL CONCRETE SHALL BE CLASS B R.C.C.
3. THE AREA INCLUDED WITHIN THE SLOPES OF THE DRIVEWAY SHALL BE GIVEN A HEAVY BROOM FINISH AFTER BEING TROWELED.
4. SCORING LINES SHALL CORRESPOND WITH SCORING LINES IN THE ADJACENT SIDEWALK UNLESS OTHERWISE SPECIFIED.
5. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

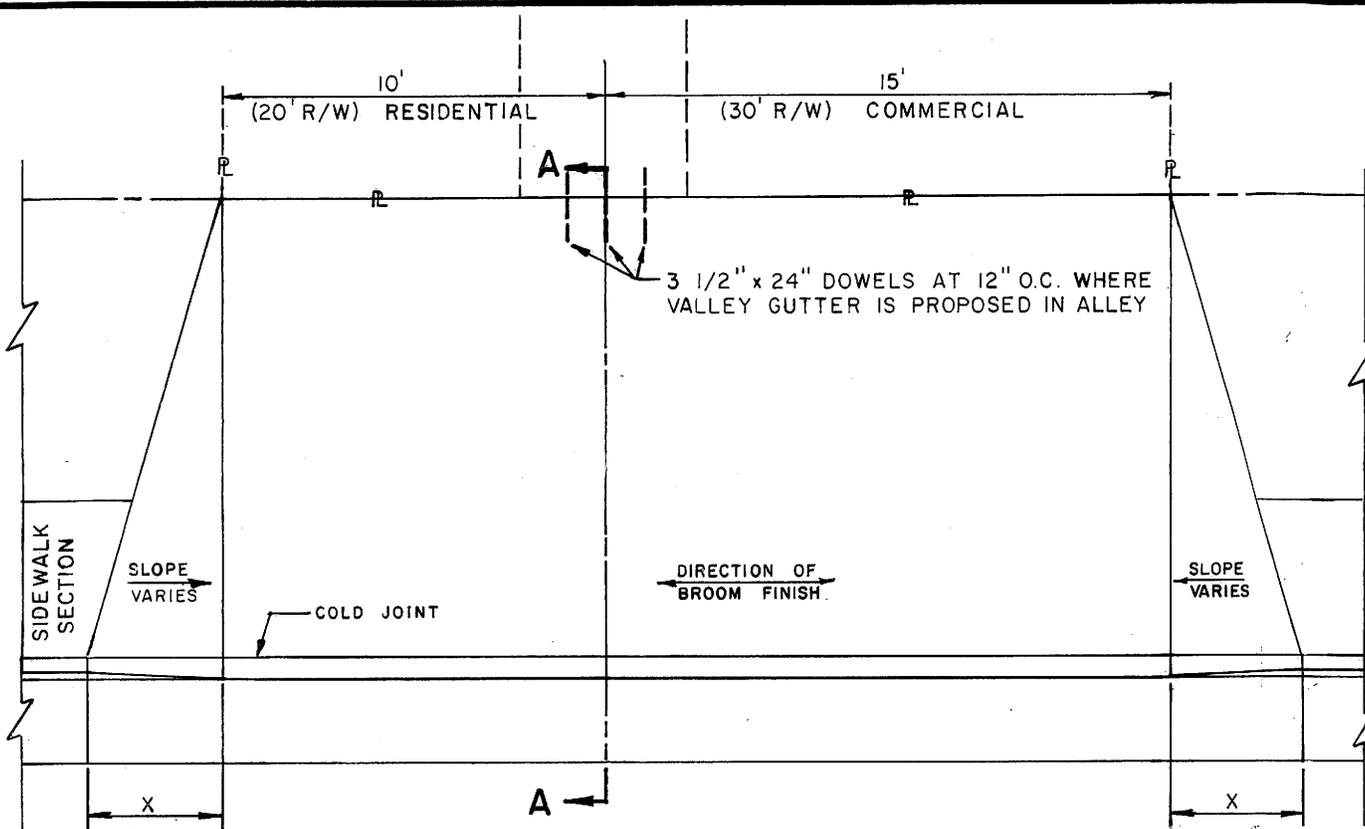
PUBLIC WORKS
STANDARD NO S10

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Pills 18036
CITY ENGINEER RCE NO.

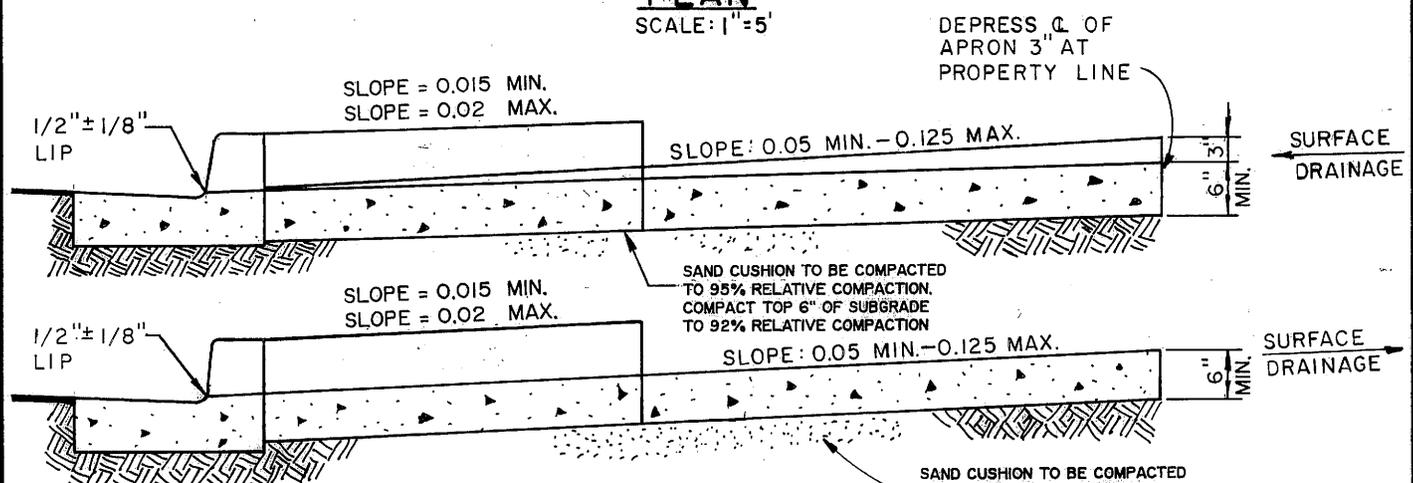
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD DRIVEWAY MODIFICATION
FOR EXISTING ROLL CURB

DWG. NO.

15



PLAN
SCALE: 1" = 5'



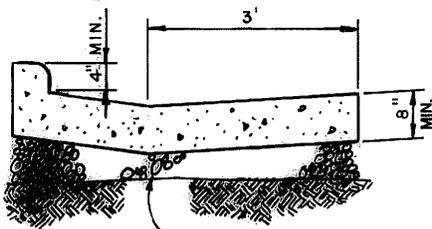
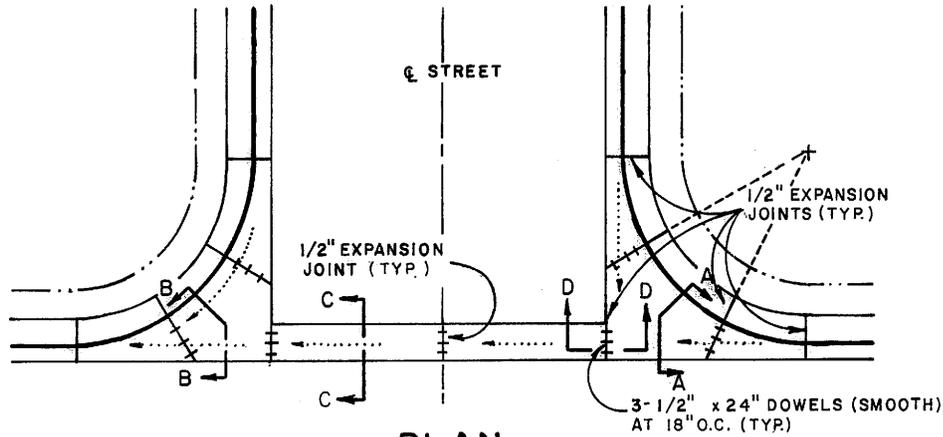
SECTION A-A
SCALE: 1/2" = 1'-0"

NOTES:

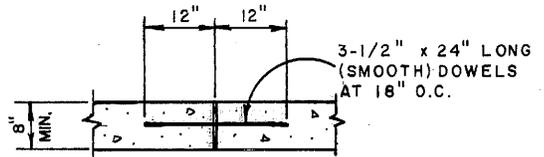
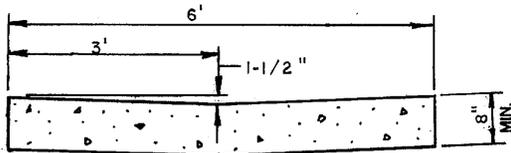
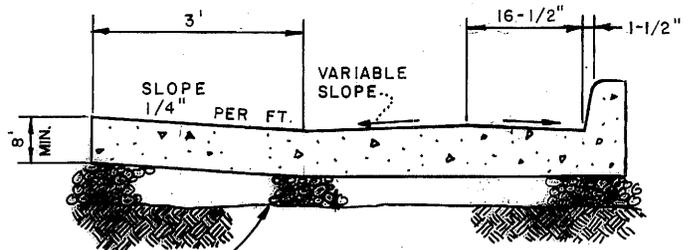
1. ALL CONCRETE SHALL BE CLASS B R.C.C.
2. ALL WORK PERFORMED AND MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
3. X DISTANCE SHALL BE THE SAME AS FOR COMMERCIAL DRIVEWAYS UNLESS SPECIAL WRITTEN PERMISSION IS GRANTED.
4. MINIMUM WIDTH OF SIDEWALK IS 4 FEET, SUBJECT TO INCREASE BY THE ENGINEER, FOR LOCATIONS WITH HEAVY PEDESTRIAN TRAFFIC.
5. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S11	
DES: _____ DWN: <u>L.R.W.</u> CHK: _____ DATE: _____ APPROVED: CITY ENGINEER RCE NO. <u>18036</u>	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD ALLEY ENTRANCE	DWG. NO. 16

4" MIN. EXCEPT 1/2" MAX. AT HANDICAPPED RAMPS, TYPICAL



6" MIN. AGGREGATE BASE TO BE COMPACTED TO 95% RELATIVE COMPACTION. COMPACT TOP 6" OF SUBGRADE TO 92% RELATIVE COMPACTION



NOTES:

1. WORK TO BE DONE, AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. CONCRETE SHALL BE CLASS B R.C.C.
3. AN 8-INCH FLOW LINE SHALL BE LEFT SMOOTH TROWELED.
4. BROOMING SHALL BE PARALLEL TO THE DIRECTION OF FLOW.
5. EXPANSION JOINT AT MIDPOINT, BUT NOT TO EXCEED 15 FEET OR AS DIRECTED BY THE ENGINEER.
6. NO STANDING WATER WILL BE ALLOWED THRU THE LENGTH OF THE CROSS GUTTER AND THE SPANDRELS.
7. CONTROL JOINT SHALL BE INSTALLED RADIALLY THRU SPANDREL AT LIMITS OF HANDICAP RAMP.
8. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

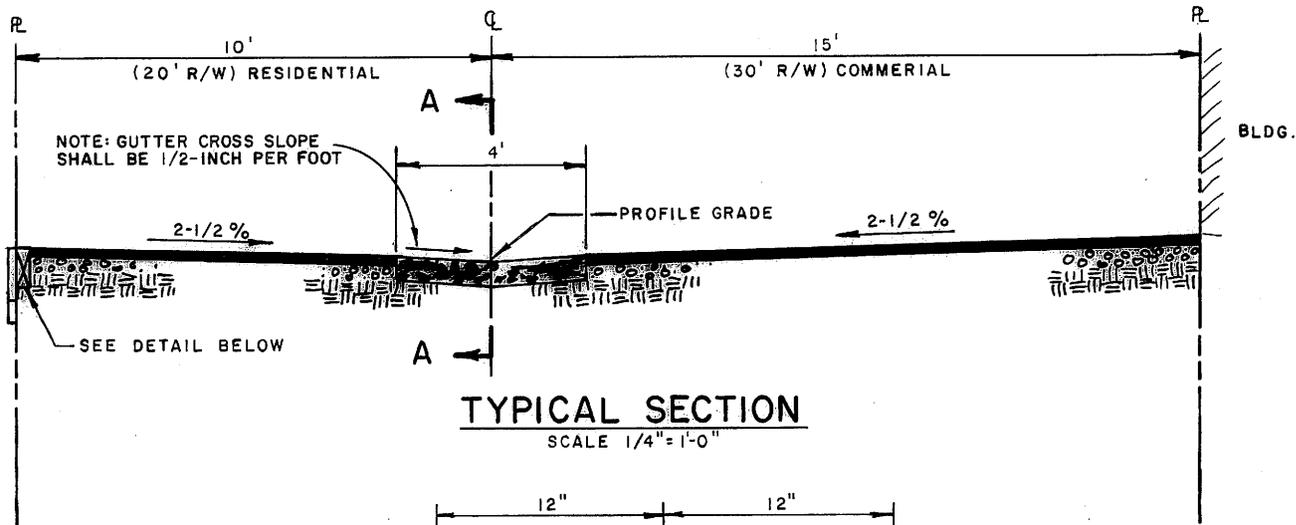
PUBLIC WORKS
STANDARD NO S12

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Pille 18036
CITY ENGINEER RCE NO.

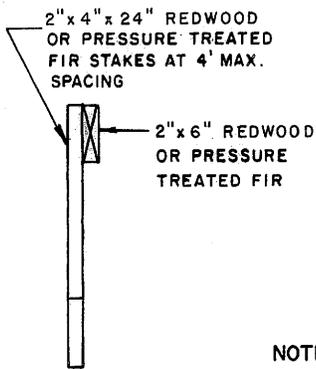
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
VALLEY GUTTER

DWG. NO.

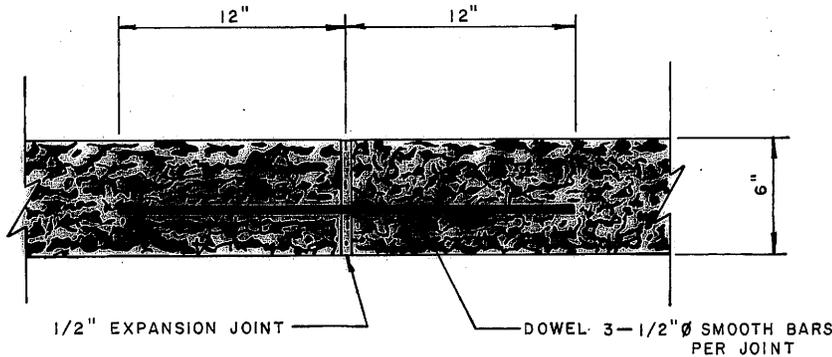
17



TYPICAL SECTION
SCALE 1/4" = 1'-0"



HEADER DETAIL
SCALE 1/2" = 1'-0"



SECTION A-A
SCALE 1" = 1'-0"

NOTES :

1. SURFACE AND BASE THICKNESS SHALL BE DETERMINED IN ACCORDANCE WITH GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS, OR AS DIRECTED BY THE ENGINEER, BUT IN NO CASE BE LESS THAN OUTLINED BELOW.
2. HEADERS SHALL BE USED EXCEPT WHEN BUILDINGS OR OTHER PERMANENT IMPROVEMENTS ABUT THE ALLEY, AND SHALL BE LEFT IN PLACE AFTER CONSTRUCTION.
3. INSTALL FULL DEPTH EXPANSION JOINTS EVERY 20' IN VALLEY GUTTER.
4. EXPANSION JOINTS TO BE DOWELED AS SHOWN ABOVE.
5. REDWOOD HEADERS TO BE FOUNDATION GRADE OR BETTER.
6. WORK PREFORMED AND MATERIALS SUPPLIED SHALL CONFORM TO GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
7. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

STRUCTURAL DESIGN SECTION (MINIMUM)

AGGREGATE BASE — 0.33'
PRIME COAT — 0.10 - 0.20 GAL./SQ. YD.
ASPHALT CONCRETE — 0.15'
FOG SEAL — 0.10 GAL./SQ. YD.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

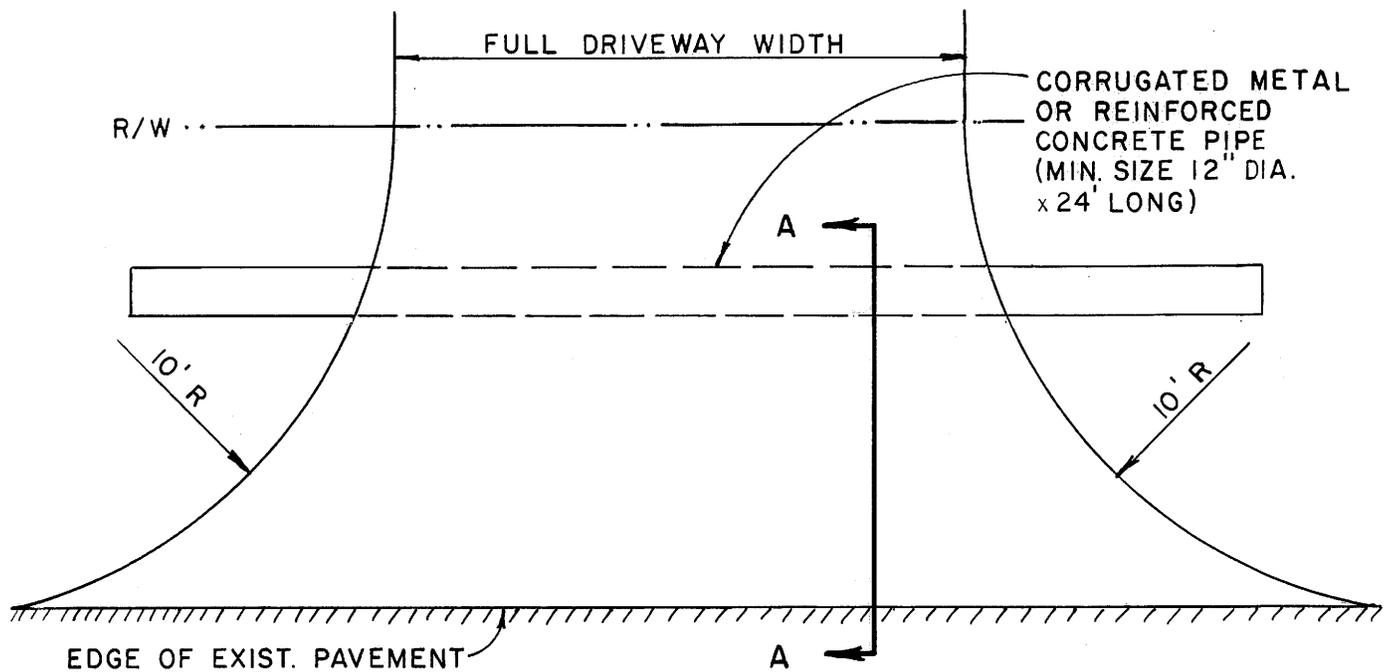
PUBLIC WORKS STANDARD NO S 13

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Peltz 18036
CITY ENGINEER RCE NO.

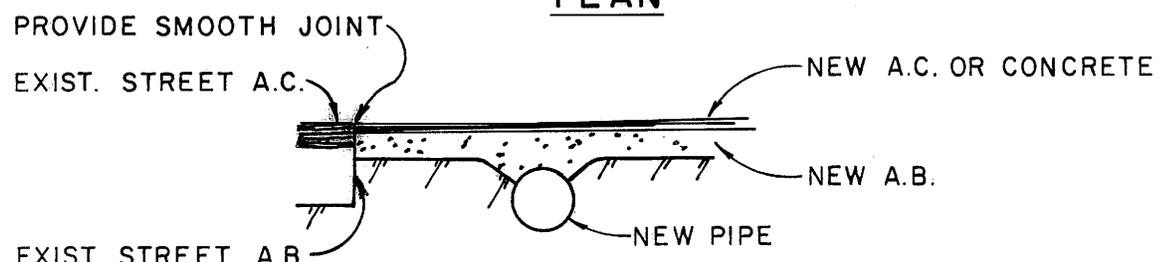
**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
ALLEY & VALLEY
GUTTER**

DWG. NO.

18



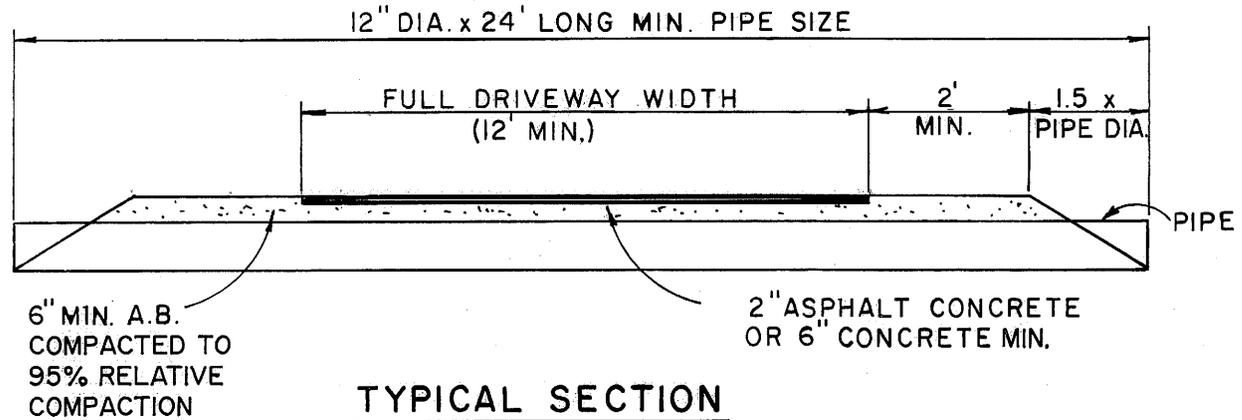
PLAN



SECTION A-A

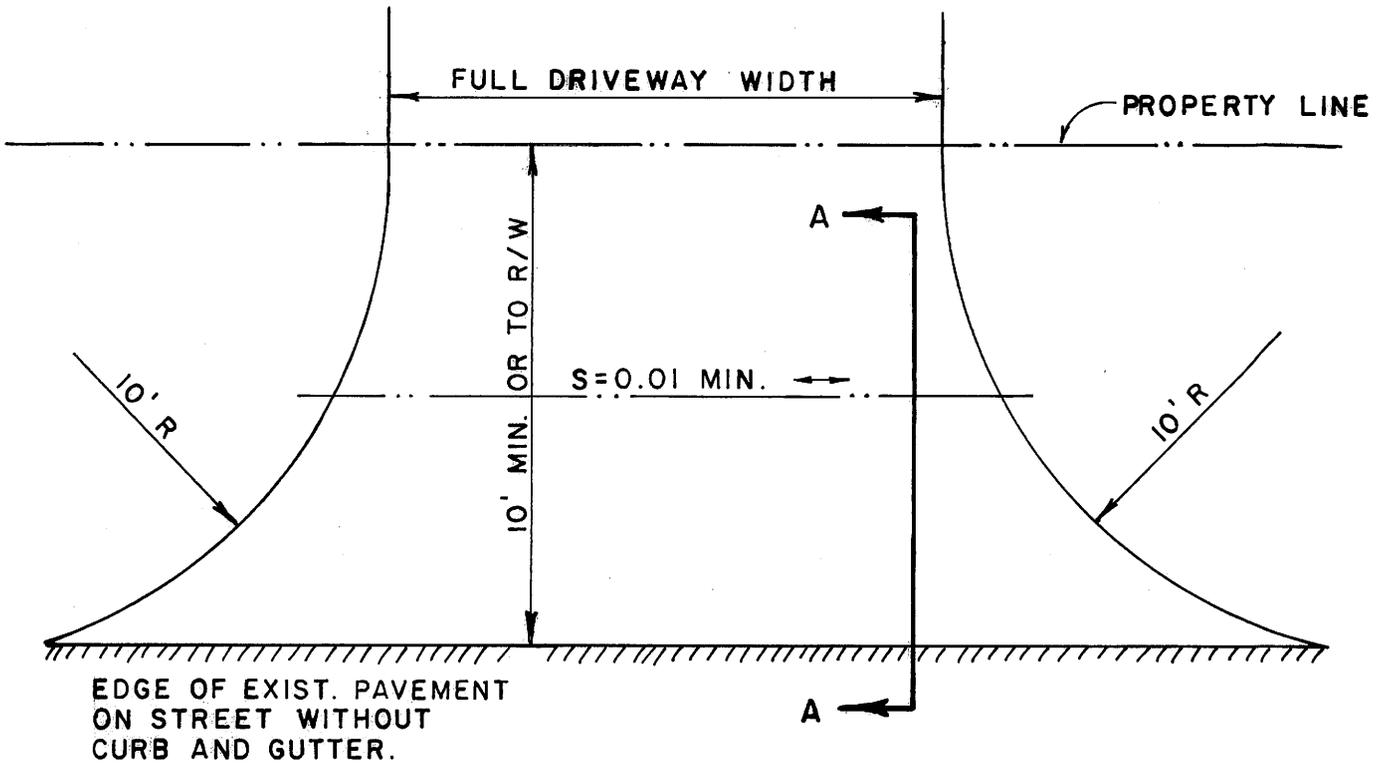
NOTES:

1. REFER TO CITY STANDARD G3 FOR PIPE BACKFILL REQUIREMENTS.
2. CONCRETE SHALL BE CLASS "B" P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.



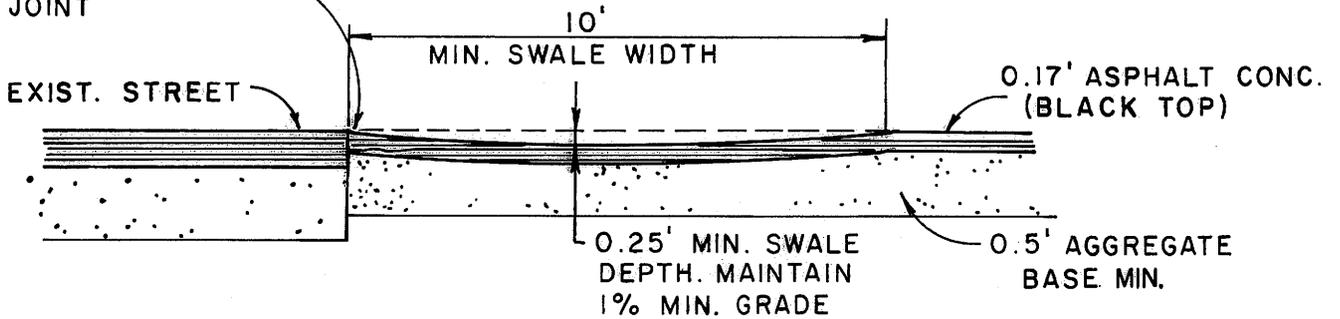
TYPICAL SECTION

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO S14	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: <i>Ray D. Pelt</i> 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD DRIVEWAY CULVERT	DWG. NO. 19



PLAN

PROVIDE A SMOOTH STRAIGHT JOINT



SECTION A-A

APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

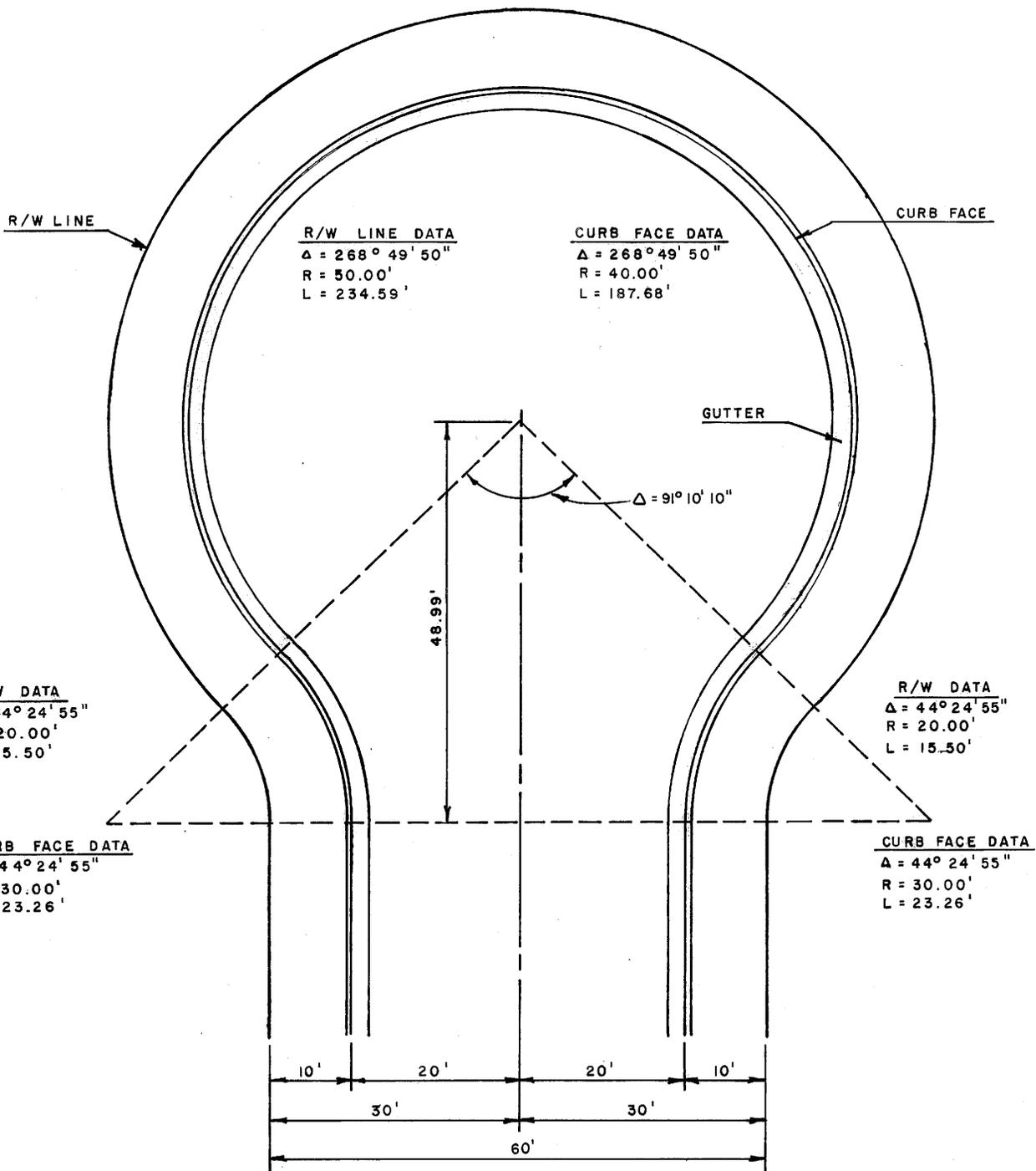
PUBLIC WORKS
STANDARD NO S15

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rolfe 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
**DRIVEWAY APPROACH
SWALE**

DWG. NO.

20



APPROVED BY CITY COUNCIL
 RESOLUTION NO 50
 DATE: SEPTEMBER 16, 1991

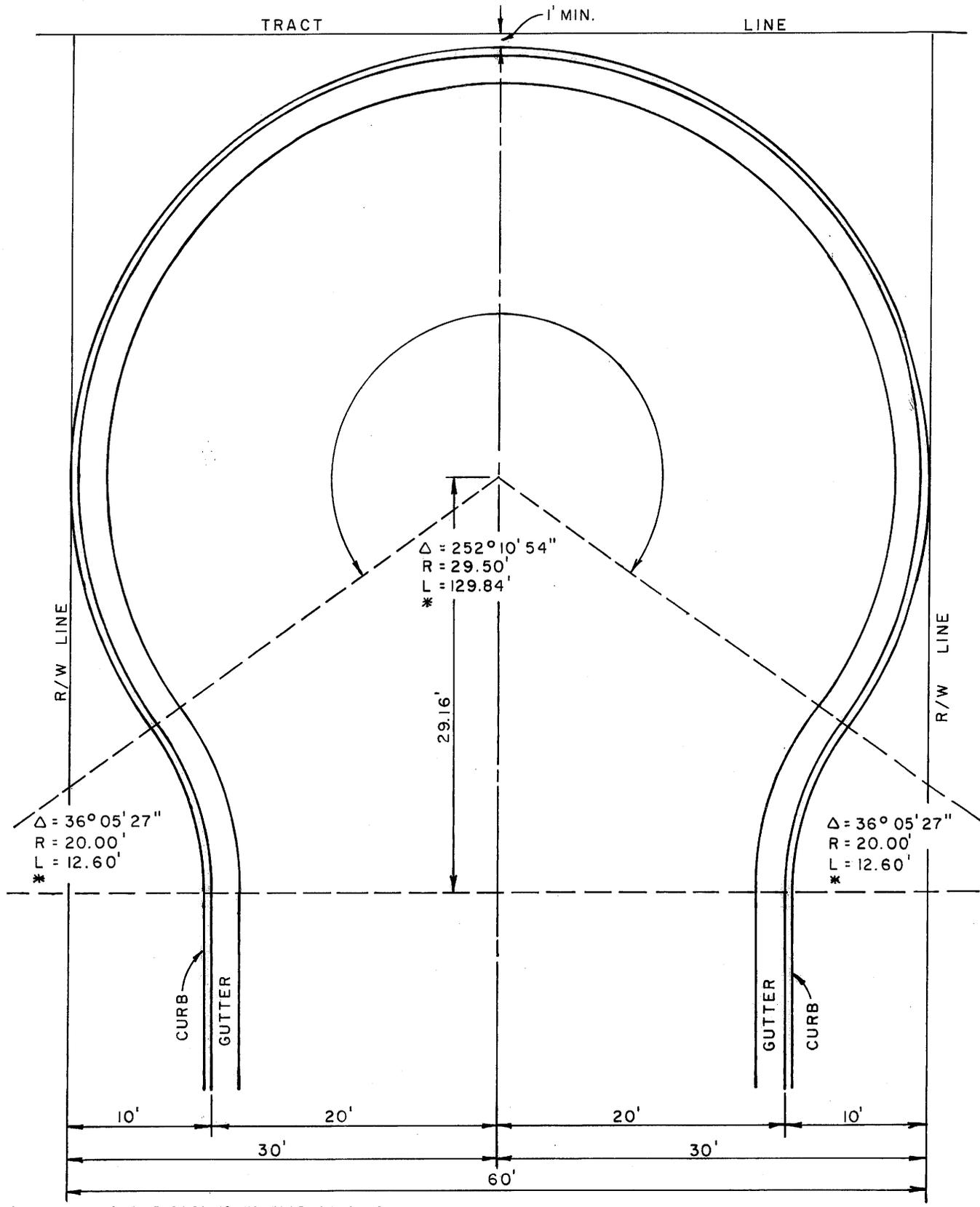
PUBLIC WORKS
 STANDARD NO S16

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Pille 18036
 CITY ENGINEER RCE NO.

CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 STANDARD CUL-DE-SAC

DWG. NO.

21



*NOTE: ALL CURVE DATA IS TO FACE OF CURB

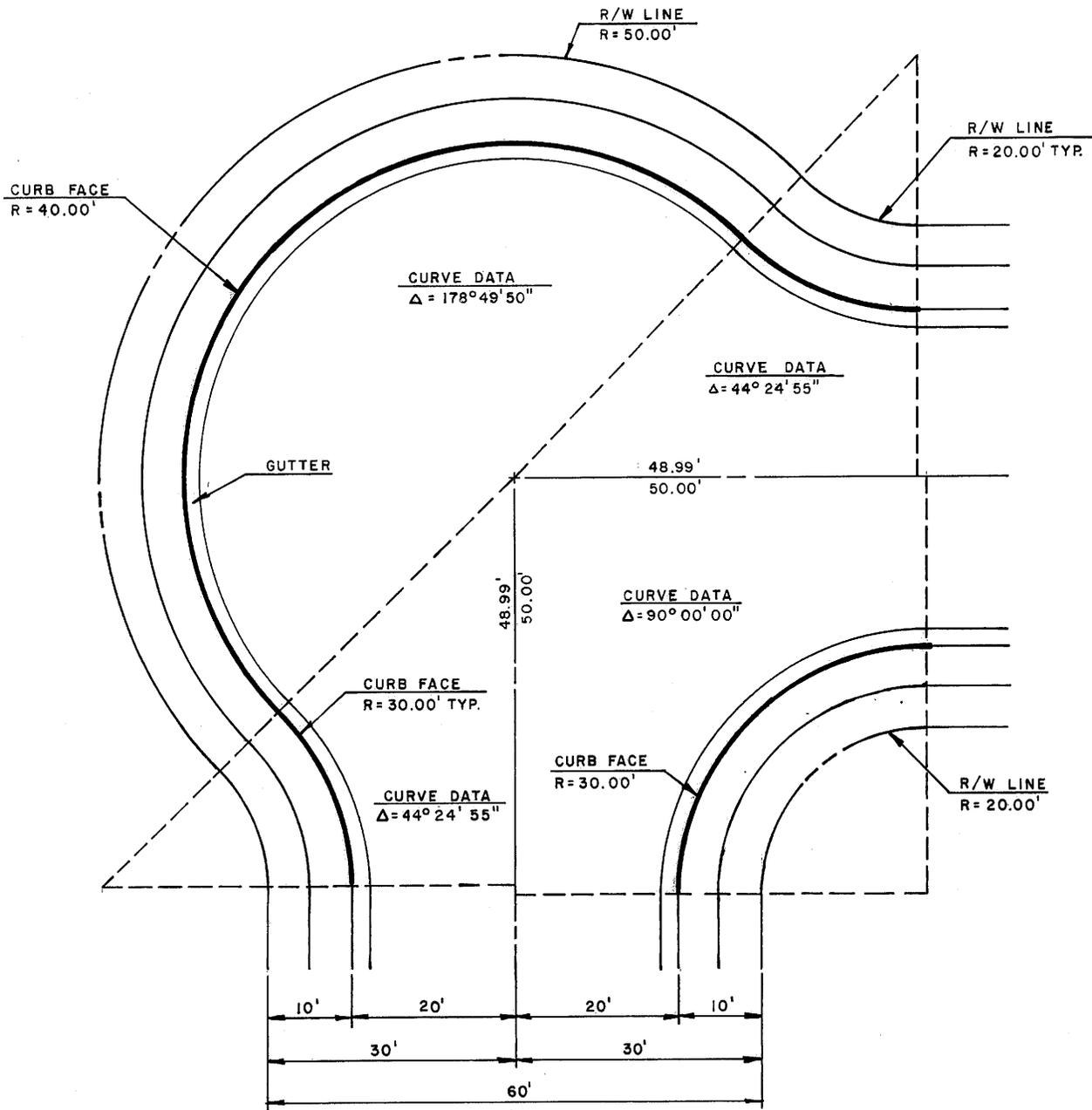
APPROVED BY CITY COUNCIL
 RESOLUTION NO 50
 DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
 STANDARD NO S 17

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Bell 18036
 CITY ENGINEER RCE NO.

CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 TEMPORARY CUL-DE-SAC

DWG. NO.
22



NOTE: HANDICAPPED RAMP LOCATIONS TO BE DETERMINED BY THE CITY ENGINEER.

SCALE: 1" = 20'

APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
 STANDARD NO S18

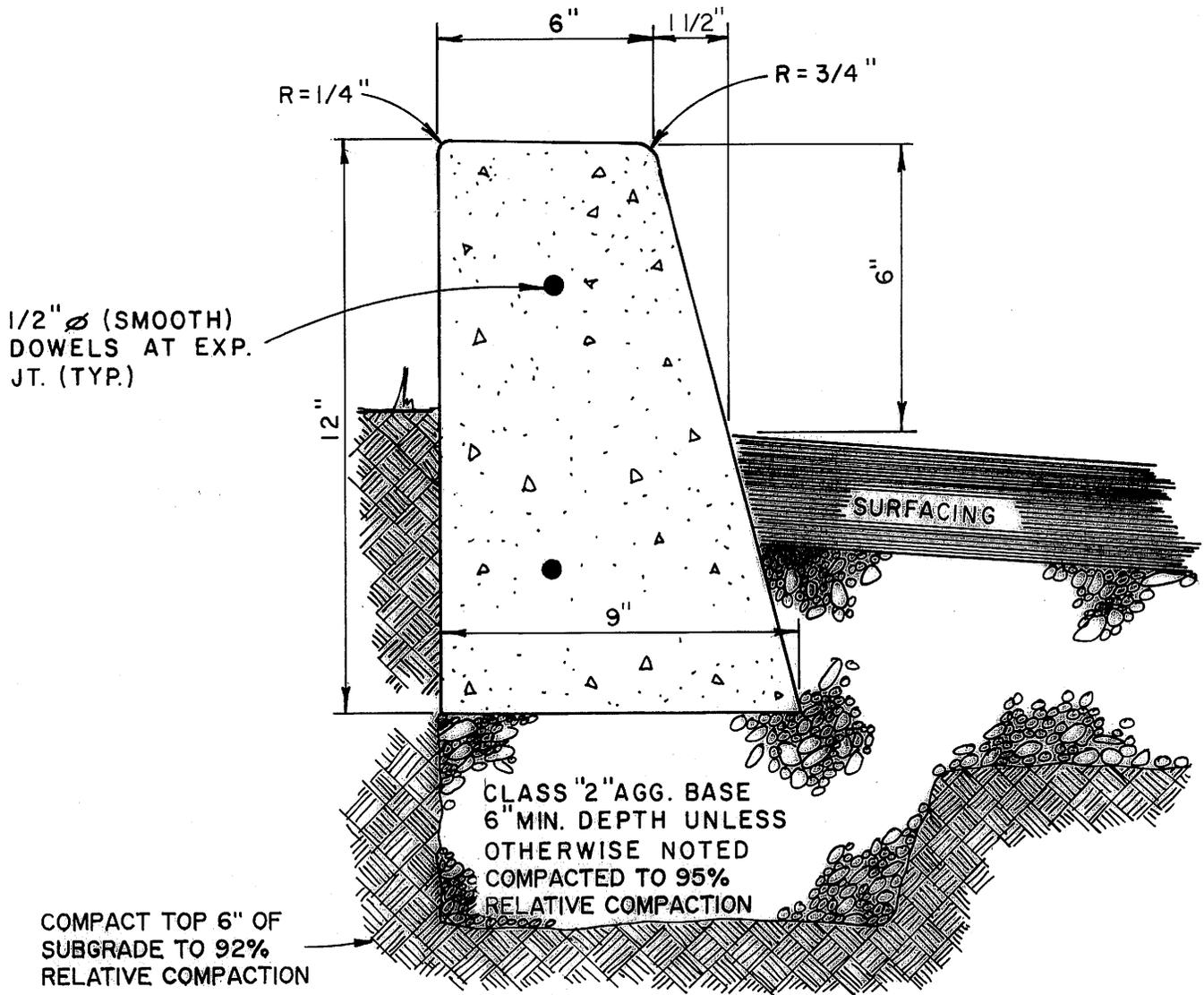
DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Rhee 18036
 CITY ENGINEER RCE NO.

CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS

CURVE "KNUCKLE"

DWG. NO.

23



NOTES:

1. THIS SECTION TO BE USED ONLY FOR PARKING LOTS OR AS APPROVED BY THE ENGINEER.
2. CONCRETE SHALL BE CLASS B, 4" MAX. SLUMP - 40.5 LIN. FT. PER CUBIC YARD.
3. PROVIDE 1/2" FULL DEPTH EXPANSION JOINTS AT 20' O.C. MAX. W/ 2-1/2" \varnothing x 24" (SMOOTH) DOWELS AT EACH JOINT.
4. LAMPBLACK OF APPROVED QUALITY SHALL BE MIXED WITH ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO S19

DES: _____ DWN: L.R.W.

CHK: _____ DATE: _____

APPROVED:

Ray D. Rell 18036

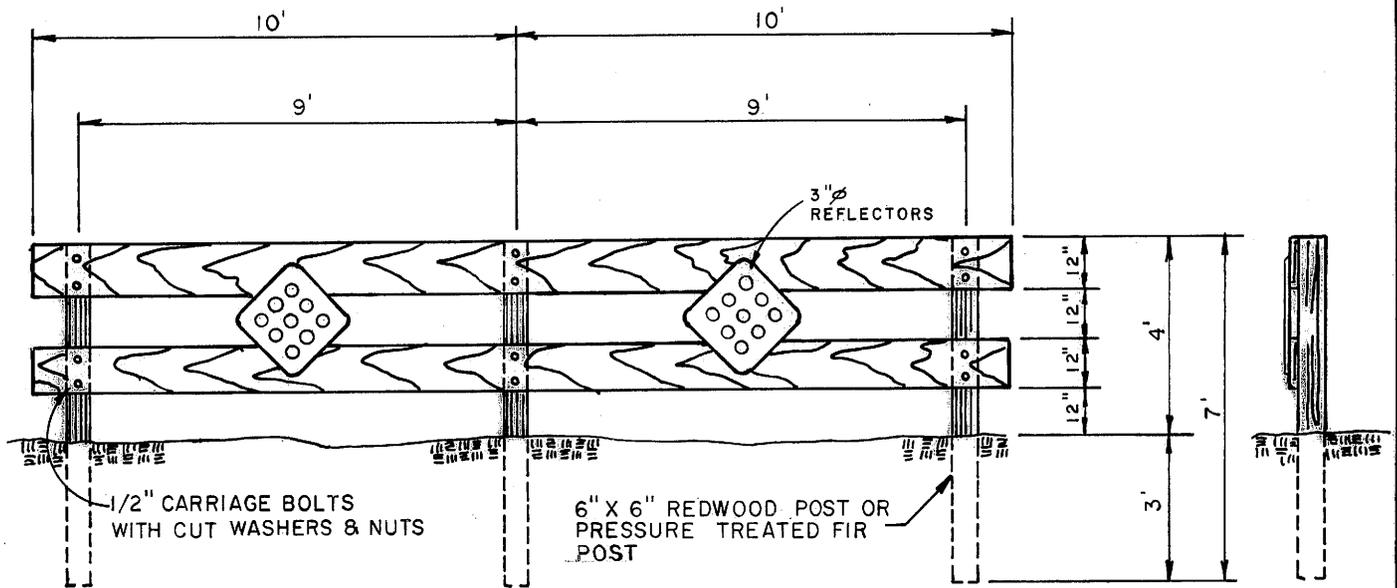
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

PARKING CURB

DWG. NO.

24

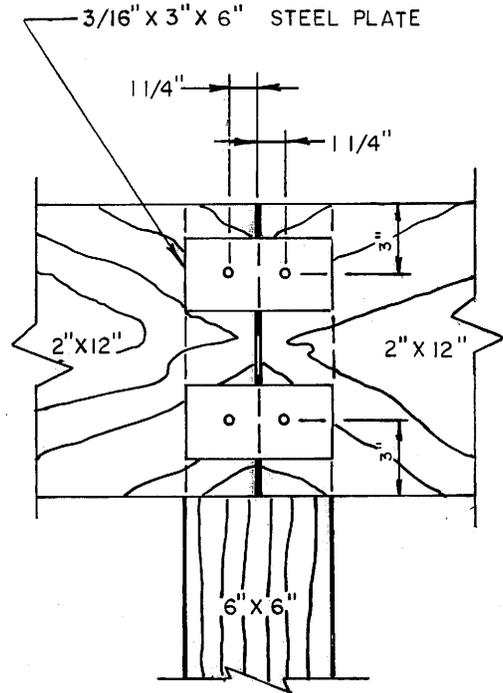


MATERIALS LIST:

- 2 — 2" X 12" X 20' (NO.2 AND BETTER DOUGLAS FIR)
- 3 — 6" X 6" X 7' ('A' AND BETTER OR PRESSURE TREATED FIR)
- 2 — 18" X 18" REFLECTORS (TYPE N-4)

NOTES:

1. BARRICADES TO BE ERECTED AT EACH STREET TERMINAL IN ACCORDANCE WITH THE SPECIFICATIONS.
2. ALL LUMBER TO BE S4S.
3. ALL EXPOSED SURFACES TO BE PAINTED WITH TWO COATS OF WHITE EXTERIOR GRADE PAINT.
4. BARRICADE INSTALLATION SHOWN IS TO BE USED FOR STREETS HAVING CURB TO CURB WIDTHS UP TO 40 FEET. WHERE A WIDER WIDTH OF BARRICADE IS REQUIRED, IT SHALL BE MADE IN 10 FEET MULTIPLES OF THE ABOVE UNIT.



DETAIL OF BUTT JOINT

APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

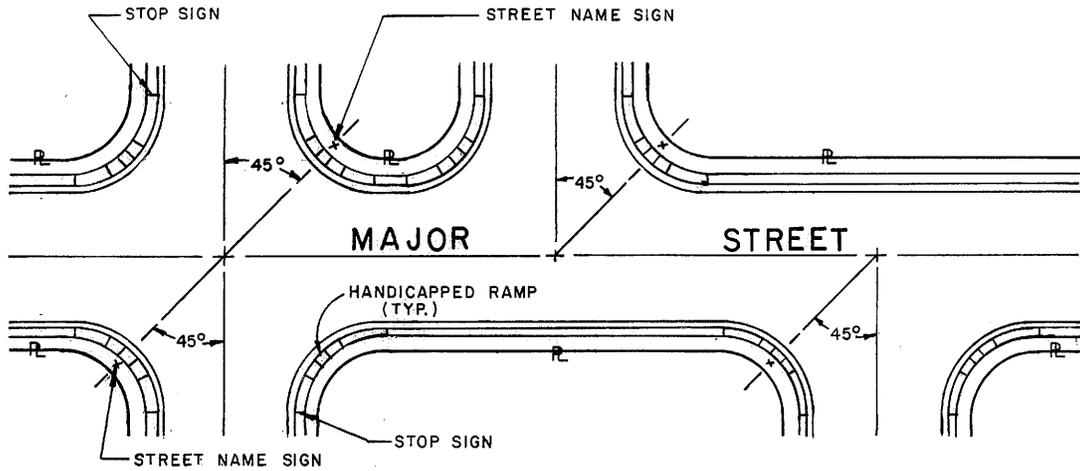
**PUBLIC WORKS
 STANDARD NO S20**

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Rell 18036
 CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 STANDARD BARRICADE**

DWG. NO.

25



TYPICAL SIGN LOCATIONS

FOR 30' CURB RADII AT
90° INTERSECTIONS

MINIMUM SIGN SPECIFICATIONS

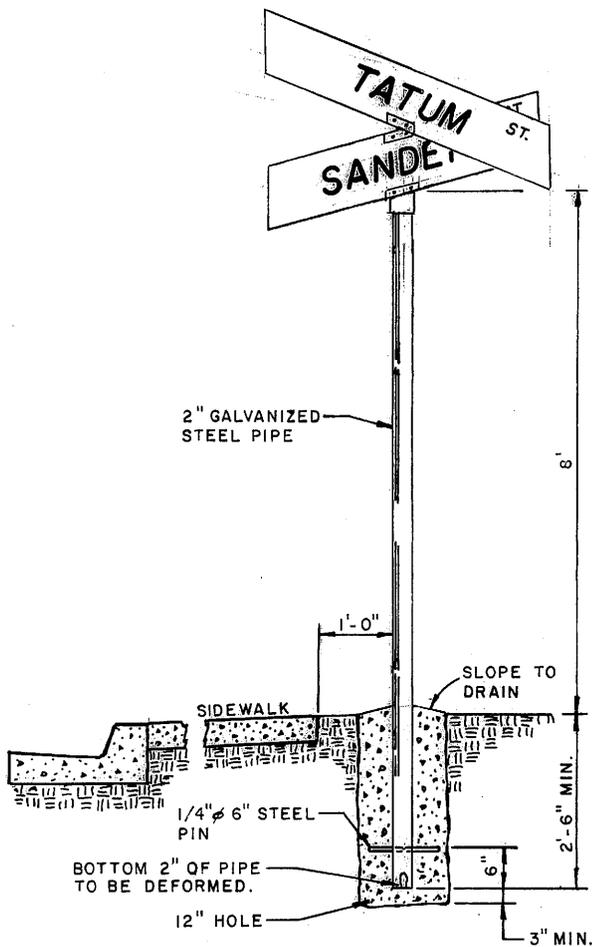
INTEGRAL STREET NAME—NUMBER SIGN TO BE HAWKINS-HAWKINS NO. (HD)PL-2C2P OR EQUAL. PLATE COVERINGS, LETTERS, AND NUMBERS SHALL BE SCOTCHLITE REFLECTIVE SHEETING, ENGINEERING GRADE:

PLATES: FB-118 (GREEN)
LETTERS, NUMBERS: SM-CI (SILVER-WHITE)
4" LETTERS
2" ABBREVIATIONS

RESIDENTIAL PLATES ARE 6" HIGH
MAXIMUM LETTERS PER NAME:
ONE WORD - 12 LETTERS
TWO WORD - 10 LETTERS

NOTES:

1. ALL VARIANCES IN SIGN LOCATIONS TO BE APPROVED BY THE ENGINEER.
2. STREET SIGN TO BE LOCATED ON THE NEAR RIGHT SIDE OF THE INTERSECTION OF THE MAJOR STREET.
3. ALLOWABLE ABBREVIATIONS TO BE USED ON STREET NAME SIGNS ARE AS FOLLOWS:
BOULEVARD—BL DRIVE—DR
STREET—ST ROAD—RD
AVENUE—AV LANE—LN
PLACE—PL COURT—CT
CIRCLE—CR WAY—WY
4. STREET NAME SIGNS IN RESIDENTIAL AREAS SHALL BE INSTALLED 1'-0" FROM BACK EDGE OF SIDEWALK.
5. STREET NAME SIGNS IN COMMERCIAL AREAS SHALL BE INSTALLED IN THE SIDEWALK, 1'-0" FROM THE PROPERTY LINE.
6. STOP SIGN STANDARDS SHALL BE LOCATED AT THE CURB RETURN, AND SHALL BE SET 1'-0" FROM THE BACK OF CURB UNLESS THE ENGINEER DETERMINES THAT THE STOP SIGN AND STREET NAME SIGN SHALL BE INCORPORATED ON ONE STANDARD WHICH WILL BE LOCATED AS PER NOTE 2. STOP SIGNS SHALL BE 30" MINIMUM.
7. STOP BARS SHALL BE INSTALLED AT LOCATIONS DETERMINED BY THE CITY ENGINEER.



**STREET NAME SIGN
ASSEMBLY & INSTALLATION**

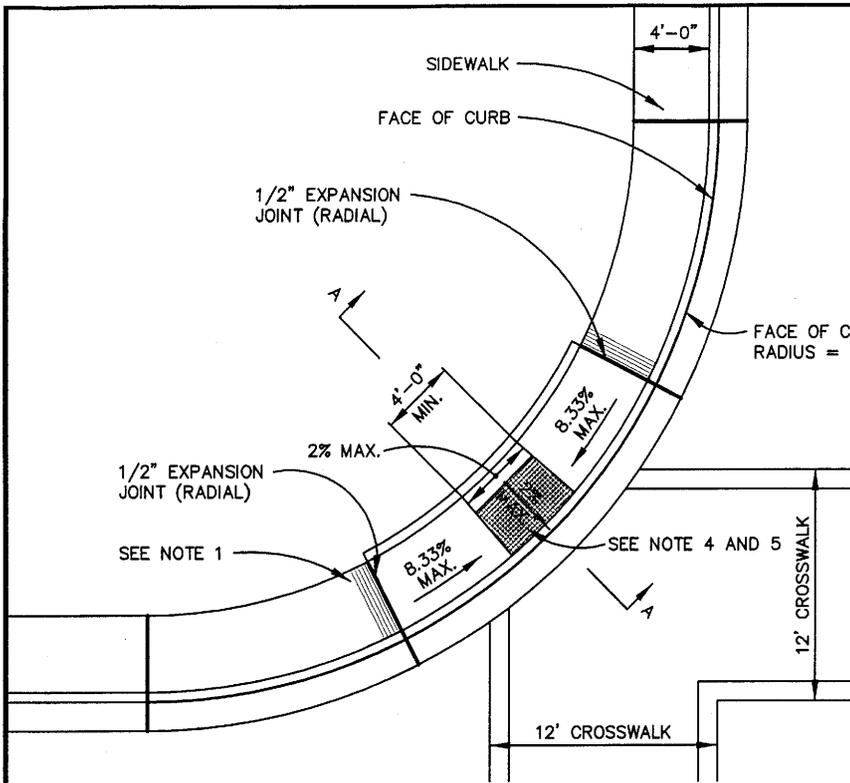
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
STANDARD NO S21**

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rell 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STREET NAME SIGN
& INSTALLATION**

DWG. NO.
26

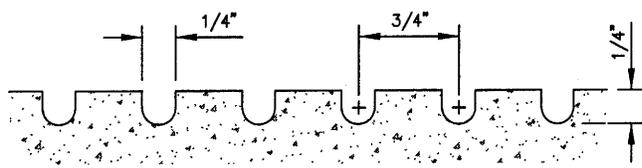


PLAN

SCALE 1" = 10'

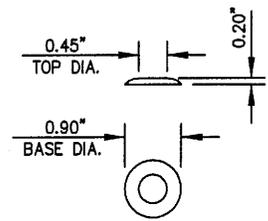
NOTES:

1. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER (SEE GROOVING DETAIL). THE GROOVED BORDER MUST BE ON THE LEVEL SURFACE AT THE TOP OF THE RAMP.
2. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
3. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP.
4. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE DETAILS ON THIS PLAN.
5. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
6. ALL CONCRETE SHALL BE CLASS "B" P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.



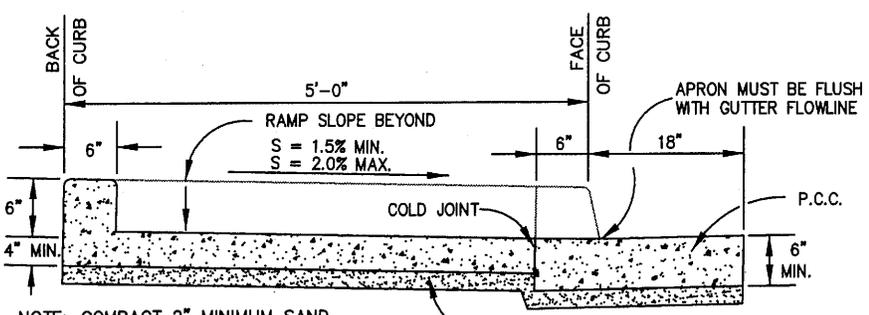
GROOVING DETAIL

NO SCALE



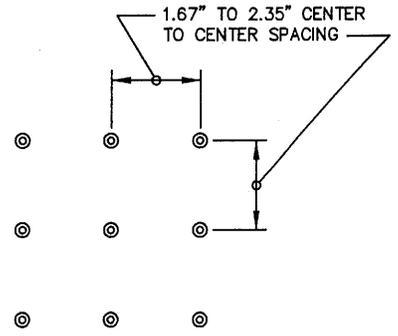
RAISED TRUNCATED DOME

NO SCALE



SECTION A-A

NO SCALE



RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE

NO SCALE

NOTE: COMPACT 2" MINIMUM SAND CUSHION TO 95% RELATIVE COMPACTION. COMPACT TOP 6" SUBGRADE TO 92% RELATIVE COMPACTION.

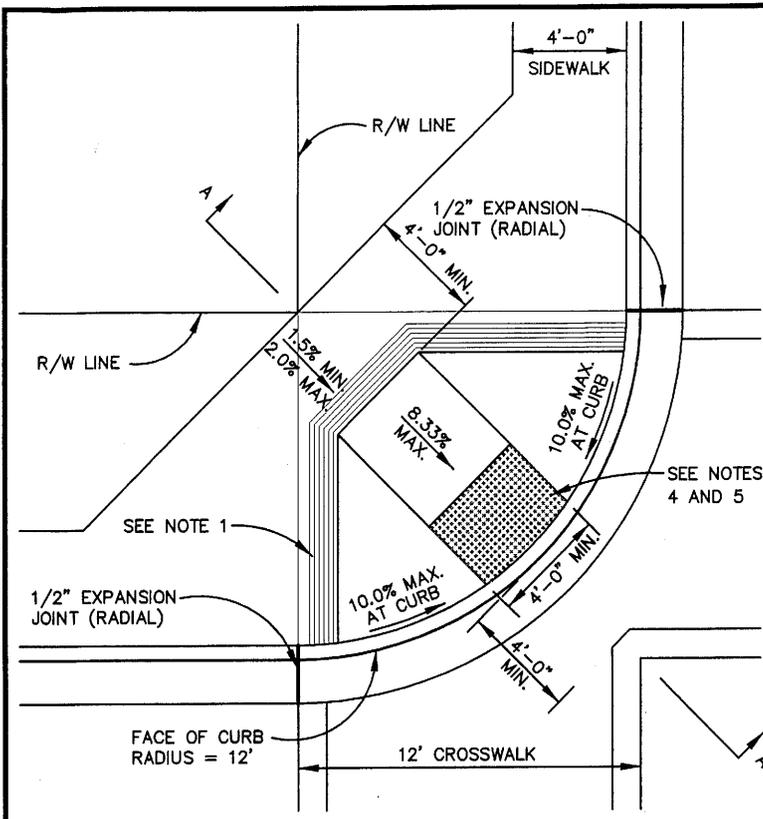
APPROVED BY CITY COUNCIL
RESOLUTION NO. 2008-R-055
DATE: AUGUST 18, 2008

**PUBLIC WORKS
STANDARD NO. S22**

DES: H.L.V. DRWN: P.W.R.
CHK: B.A.N. DATE: JULY 2008
APPROVED:
Ernie A. Nash 33381
CITY ENGINEER RCE NO.

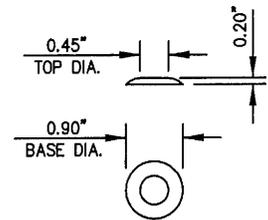
**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TYPE 1
HANDICAPPED RAMP**

DWG. NO.
27

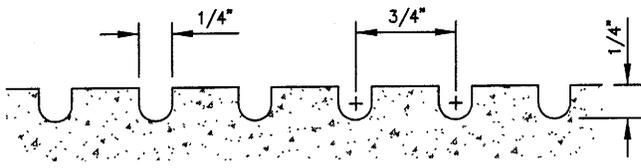


PLAN
NO SCALE

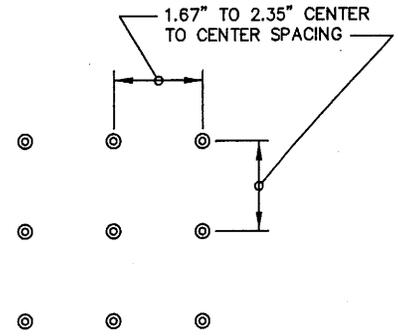
- NOTES:
1. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER (SEE GROOVING DETAIL). THE GROOVED BORDER MUST BE ON THE LEVEL SURFACE AT THE TOP OF THE RAMP.
 2. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
 3. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP.
 4. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE DETAILS ON THIS PLAN.
 5. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
 6. ALL CONCRETE SHALL BE CLASS "B" P.C.C. WITH LAMP BLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.



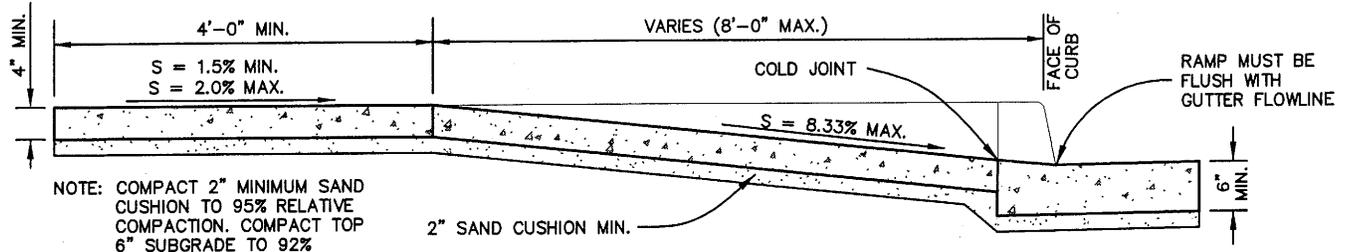
RAISED TRUNCATED DOME
NO SCALE



GROOVING DETAIL
NO SCALE



**RAISED TRUNCATED DOME
PATTERN (IN-LINE)
DETECTABLE WARNING SURFACE**
NO SCALE



NOTE: COMPACT 2" MINIMUM SAND CUSHION TO 95% RELATIVE COMPACTION. COMPACT TOP 6" SUBGRADE TO 92% RELATIVE COMPACTION.

SECTION A-A
NO SCALE

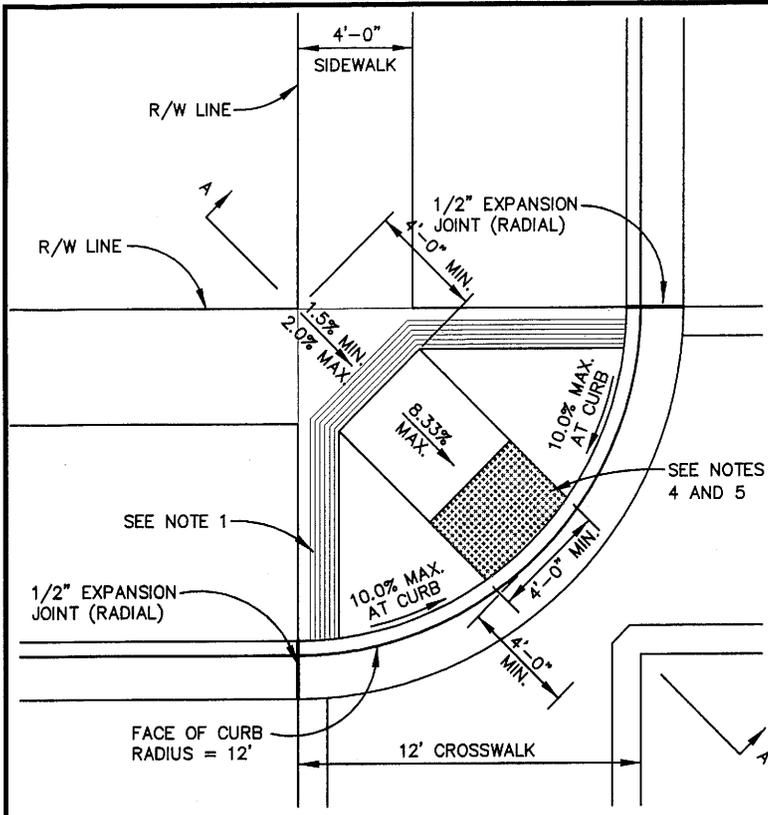
APPROVED BY CITY COUNCIL
RESOLUTION NO. 2008-R-055
DATE: AUGUST 18, 2008

**PUBLIC WORKS
STANDARD NO. S23**

DES: H.L.V. DRWN: P.W.R.
CHK: B.A.N. DATE: JULY 2008
APPROVED:
Bruce A. Nash 33381
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TYPE 2
HANDICAPPED RAMP**

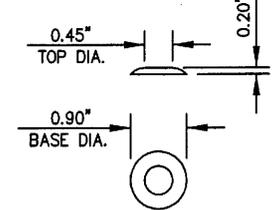
DWG. NO.
28



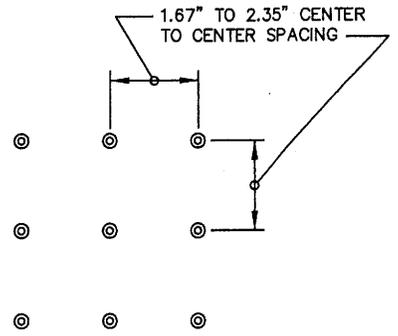
PLAN
NO SCALE

NOTES:

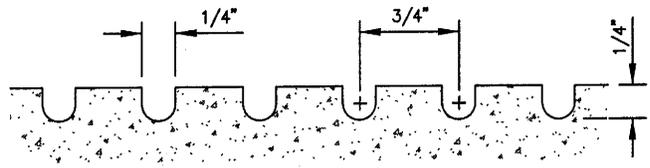
1. THE CURB RAMP SHALL BE OUTLINED, AS SHOWN, WITH A 1'-0" WIDE BORDER WITH 1/4" GROOVES APPROXIMATELY 3/4" ON CENTER (SEE GROOVING DETAIL). THE GROOVED BORDER MUST BE ON THE LEVEL SURFACE AT THE TOP OF THE RAMP.
2. TRANSITIONS FROM RAMPS AND LANDING TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
3. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 4'-0" OF THE TOP AND BOTTOM OF THE CURB RAMP.
4. CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONFORM TO THE DETAILS ON THIS PLAN.
5. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
6. ALL CONCRETE SHALL BE CLASS "B" P.C.C. WITH LAMP BLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.



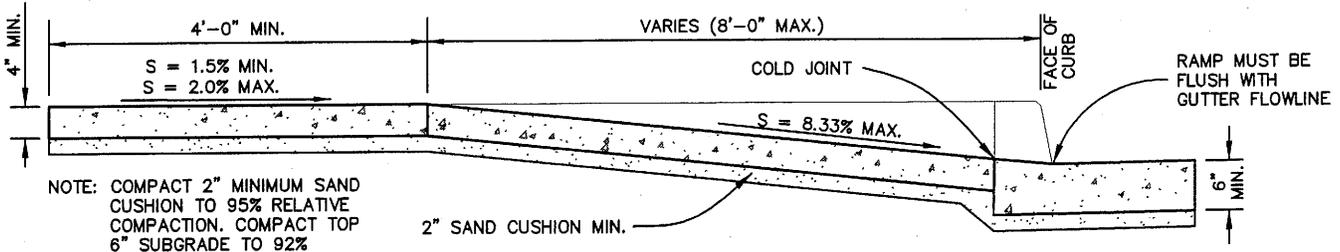
RAISED TRUNCATED DOME
NO SCALE



RAISED TRUNCATED DOME PATTERN (IN-LINE) DETECTABLE WARNING SURFACE
NO SCALE



GROOVING DETAIL
NO SCALE



NOTE: COMPACT 2" MINIMUM SAND CUSHION TO 95% RELATIVE COMPACTION. COMPACT TOP 6" SUBGRADE TO 92% RELATIVE COMPACTION.

SECTION A-A
NO SCALE

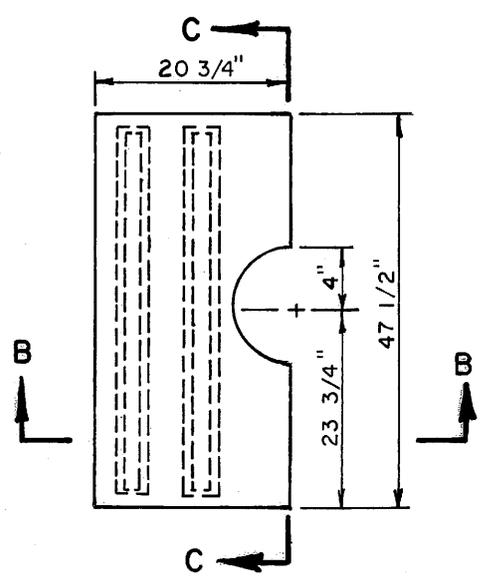
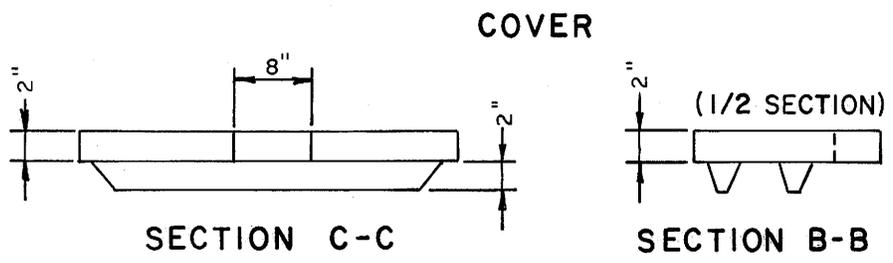
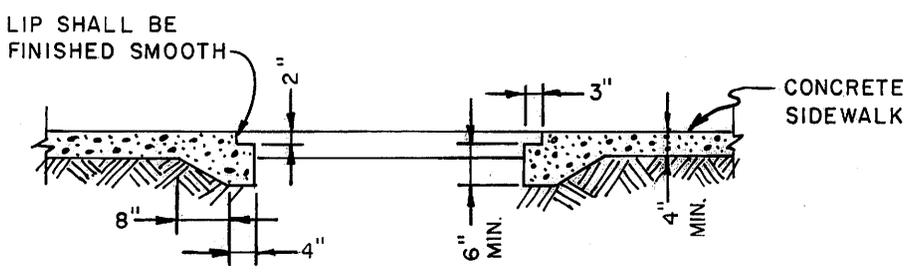
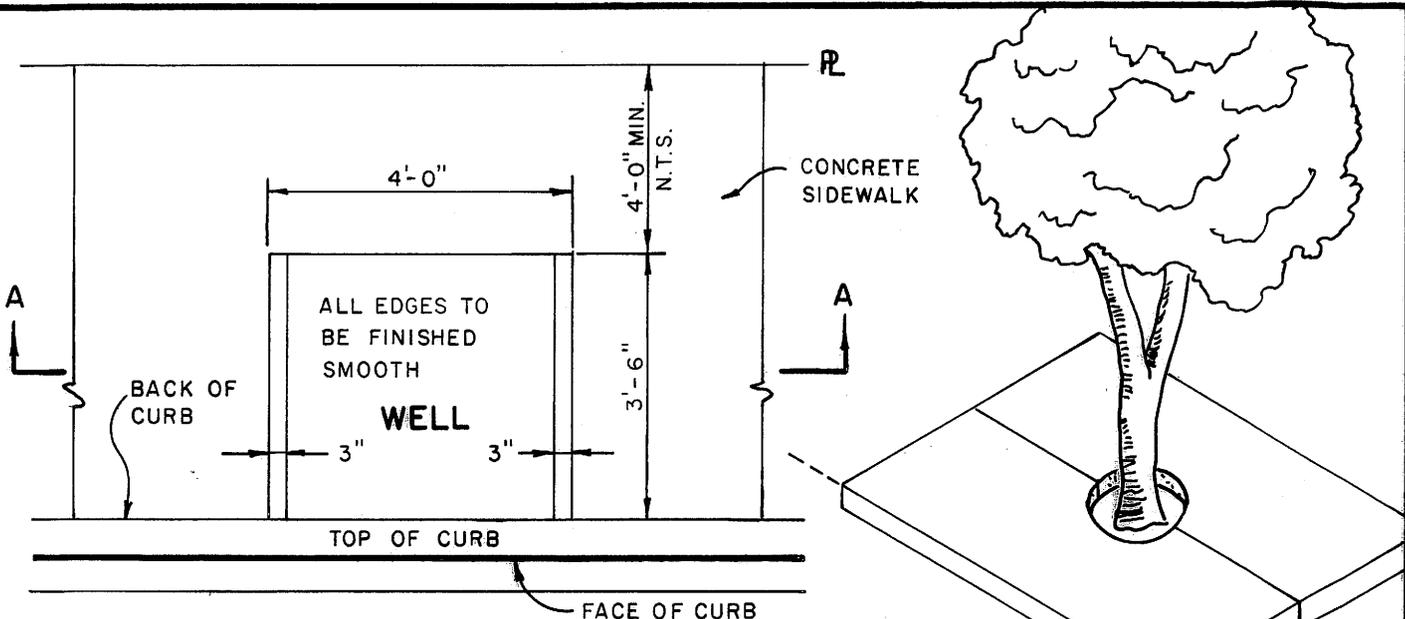
APPROVED BY CITY COUNCIL
RESOLUTION NO. 2008-R-055
DATE: AUGUST 18, 2008

PUBLIC WORKS STANDARD NO. S24

DES: H.L.V. DRWN: P.W.R.
CHK: B.A.N. DATE: JULY 2008
APPROVED:
Bruce A. Nash 33381
CITY ENGINEER RCE NO.

CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS
TYPE 3 HANDICAPPED RAMP

DWG. NO.
29



- NOTES
1. ALL DIMENSIONS SHOWN, TO BE HELD EXACTLY TO INSURE PROPER FIT FOR PRECAST COVER.
 2. COVER TO BE SIMILAR AND EQUAL TO THOSE MANUFACTURED BY E.W. COOK, INC.
 3. SPACING AND LOCATION TO BE DESIGNATED BY THE ENGINEER.

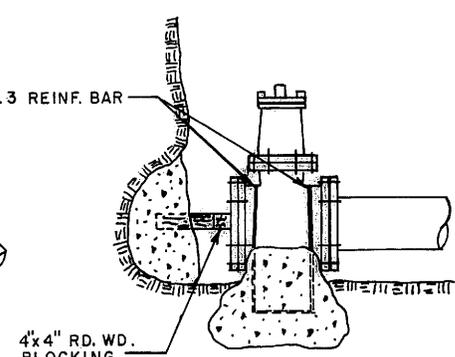
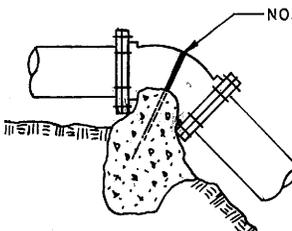
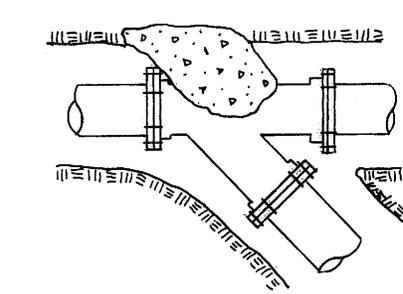
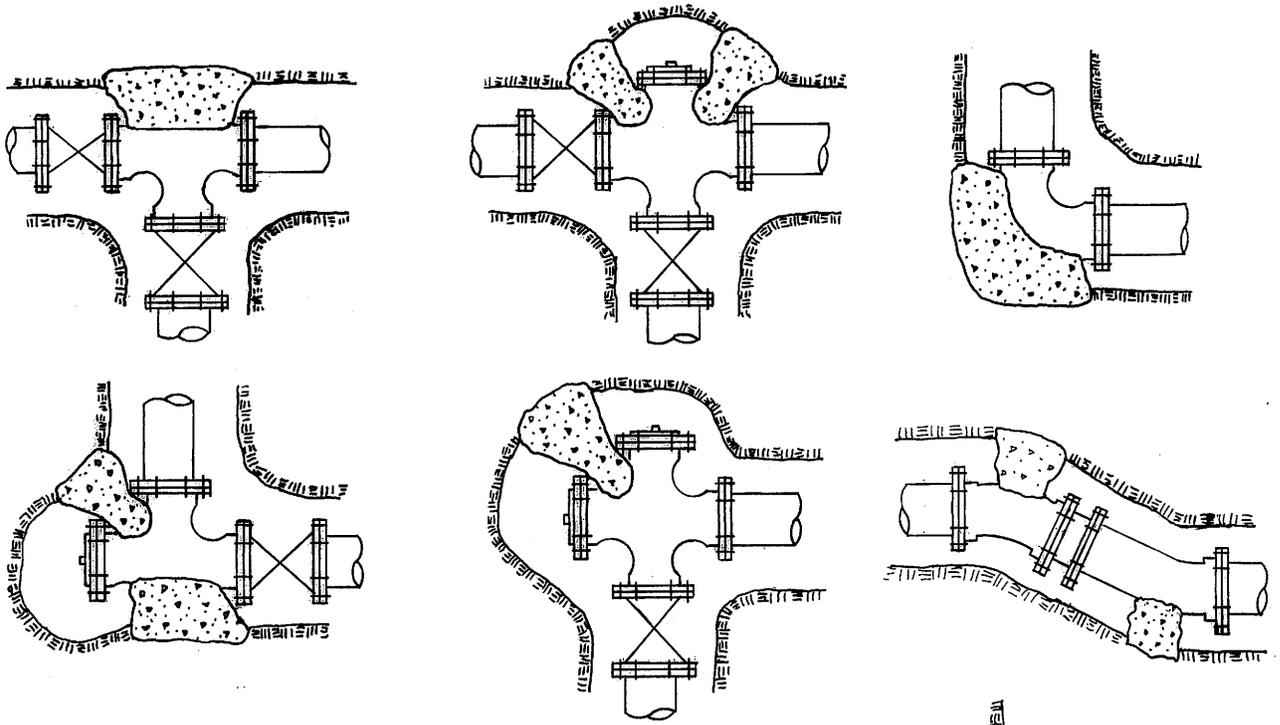
APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
 STANDARD NO S 25

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Pelt 18036
 CITY ENGINEER RCE NO.

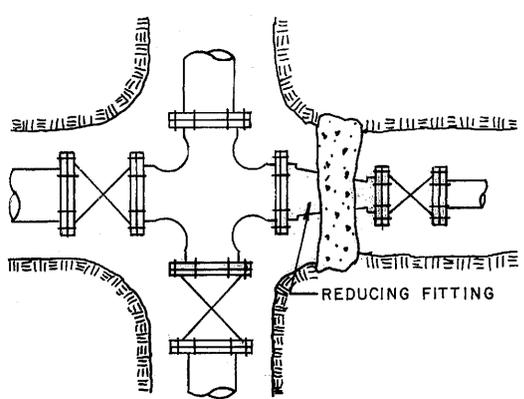
CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 TREE AND WELL
 COVER

DWG. NO.
30



VERTICAL SECTION
ANCHOR BLOCK (TYP)

GATE VALVE
ANCHOR BLOCK (TYP.)



NOTES:

1. THRUST BLOCKS SHALL BE CONSTRUCTED SO THAT THE BEARING SURFACE IS IN A DIRECT LINE WITH THE MAJOR FORCE CREATED BY THE PIPE OR FITTING.
2. ALL CONCRETE SHALL BE CLASS C P.C.C.
3. CONCRETE SHALL BE FLUID ENOUGH SO THAT IT MAY BE WORKED AROUND THE FITTING.
4. CONCRETE SHALL BE KEPT BEHIND THE BELL OF THE FITTING AND AWAY FROM BOLTS AND FITTINGS.
5. THRUST BLOCK BEARING SURFACE SHALL BE PLACED AGAINST UNDISTURBED EARTH AND SHALL HAVE A MINIMUM VOLUME OF 6 CU. FT. AND A MINIMUM BEARING AREA OF 1 SQ. FT. PER INCH OF DIAMETER. PIPES LARGER THAN 10" REQUIRE SPECIAL DESIGN.
6. A CONCRETE PAD SHALL BE POURED UNDER ALL VALVES 12" OR LARGER, OR AS DIRECTED BY THE ENGINEER.
7. ALL ANCHOR BLOCK SHALL BE CONSTRUCTED AS SPECIFIED, SIZE OF BLOCK AND NUMBER OF STRAPS TO BE DESIGNED IN EACH SITUATION.

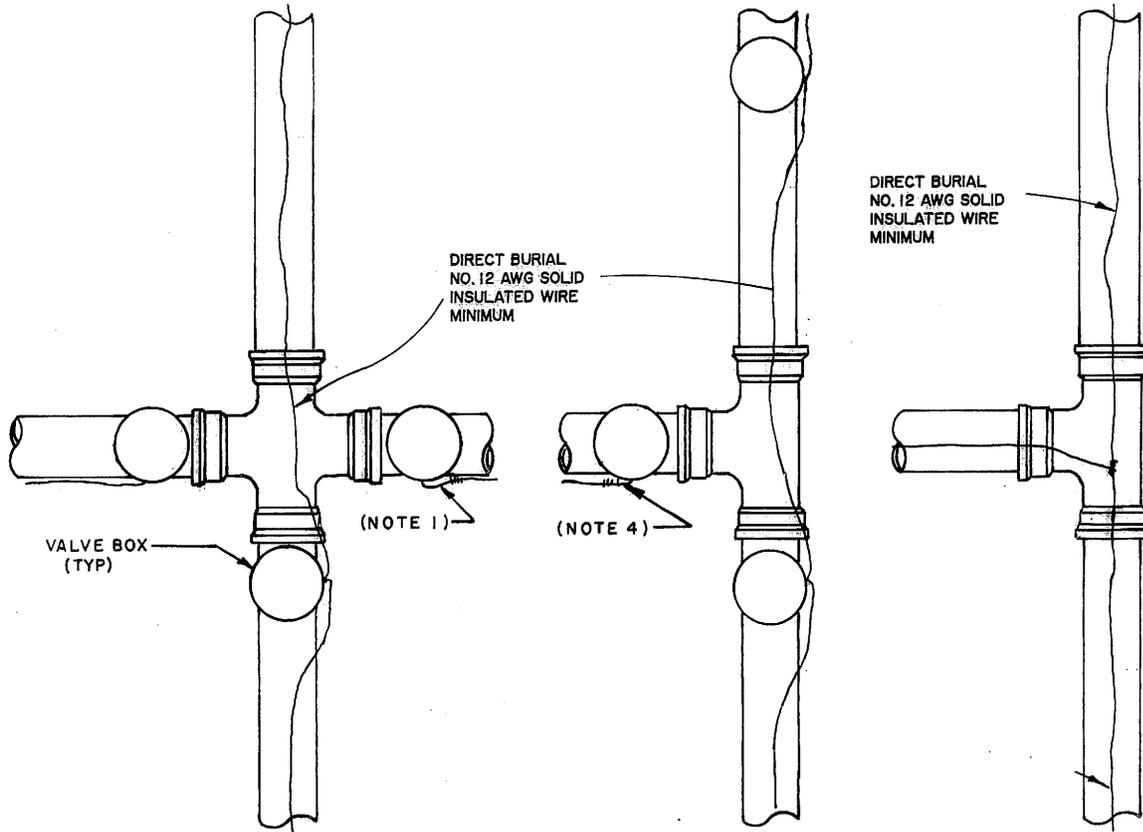
APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO W1

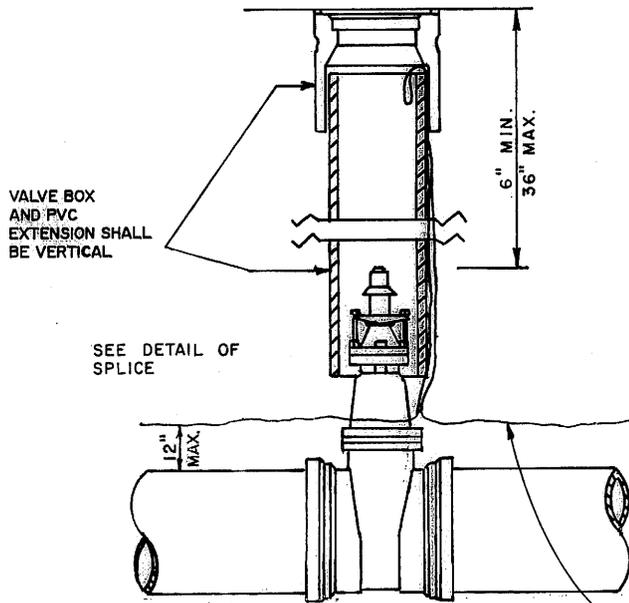
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Ralls 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TYPICAL THRUST BLOCKS
AND ANCHOR DETAILS

DWG. NO.
31

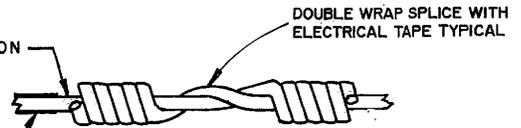


TYPICAL PLACING AT MAIN INTERSECTIONS



INSTALLATION AT VALVE BOX

REMOVE INSULATION AT SPLICE
INSULATED, INTO VALVE BOX.



DETAIL OF SPLICE

NOTES:

1. WIRE TO BE CONTINUOUS BETWEEN VALVE BOXES, EXCEPT WHERE BOXES ARE WITHIN 10' OF PIPE INTERSECTION.
2. DETECTION RISERS SHALL BE INSTALLED AT 500' INTERVALS MAXIMUM.
3. LOCATING WIRE TO BE LAID AT THE TOP OF THE PIPE BEDDING ENVELOPE. SEE CITY STD. G3.
4. IF WIRE ENDS AT VALVE BOX, RUN SINGLE INSULATOR LEAD UP TO 1" BELOW BOX COVER.

DIRECT BURIAL NO. 12 AWG SOLID INSULATED WIRE MINIMUM

APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

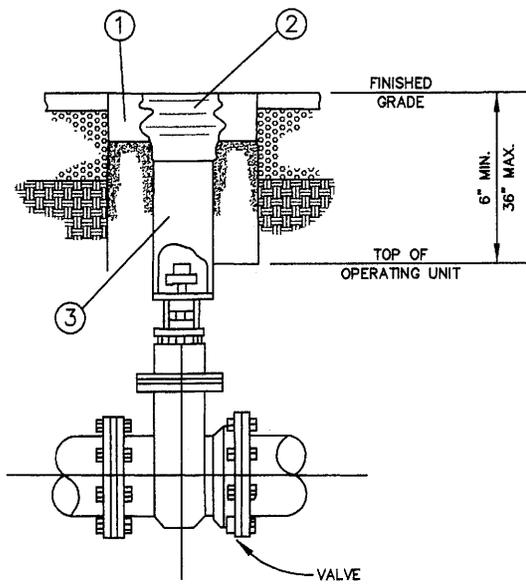
**PUBLIC WORKS
STANDARD NO W2**

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Peltz 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
LOCATING WIRE FOR
NONMETALLIC PIPELINES**

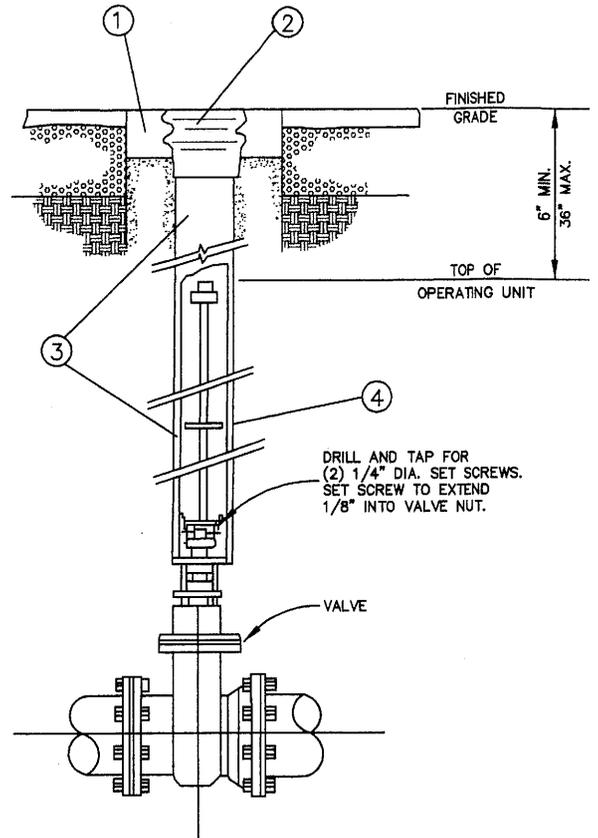
DWG. NO.

32



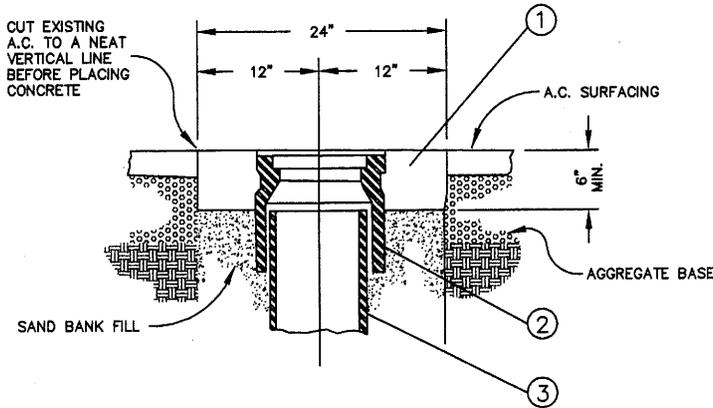
VALVE COVER DETAIL

WHERE DISTANCE BETWEEN FINISHED GRADE AND TOP OF OPERATING NUT IS 36" OR LESS



OPERATING NUT EXTENSION DETAIL

REQUIRED WHERE DISTANCE BETWEEN FINISHED GRADE AND TOP OF OPERATING NUT EXCEEDS 36"



VALVE COVER ADJUSTMENT

NOTES

- ① 24" DIA. x 6" CONCRETE COLLAR.
- ② VALVE BOX COVER—BROOKS PRODUCTS (3-RT), CHRISTY G5, BES G5 OR EQUAL.
- ③ 8" I.D. PVC PIPE EXTENSION SHALL BE VERTICAL.
- ④ OPERATING NUT EXTENSION W/ 7" DIA. PLATE WASHER WELDED TO EXTENSION AT MIDPOINT OF ROD. (MIN. LENGTH OF EXTENSION ROD SHALL BE 24")

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2004-R-028
DATE: JULY 6, 2004

PUBLIC WORKS
STANDARD NO.

W3

DES: P.W.R. DRWN: P.W.R.
CHK: H.L.V. DATE: JUNE, 2004
APPROVED:

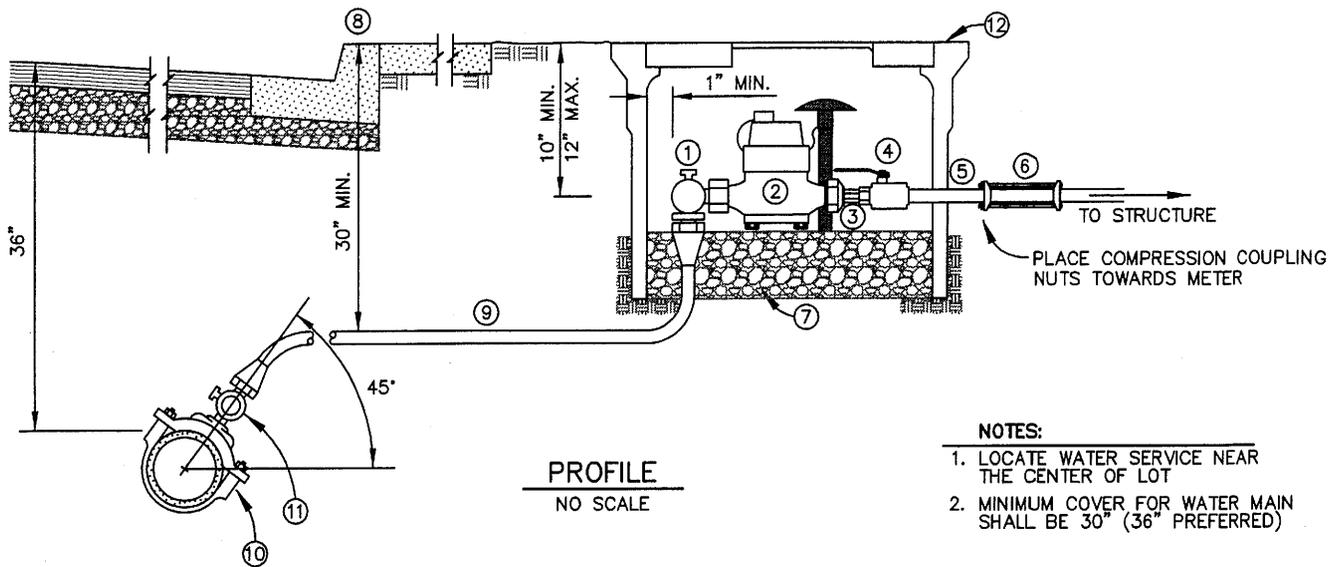
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

DWG. NO.

Bruce A. Nash 33381
CITY ENGINEER RCE NO.

VALVE COVER
INSTALLATION

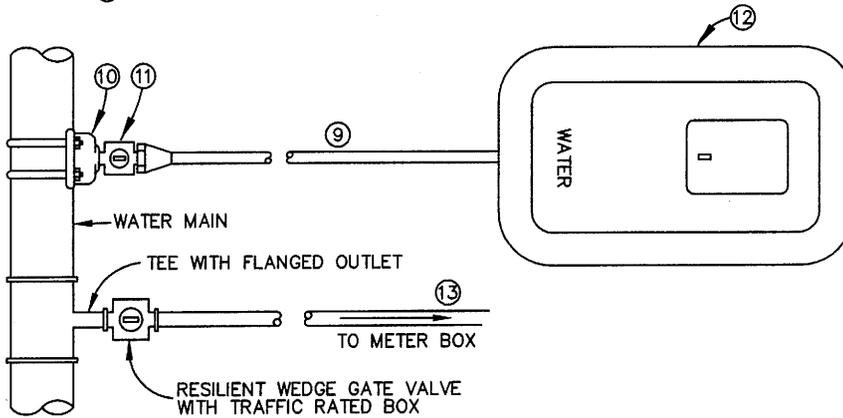
33



PROFILE
NO SCALE

NOTES:

1. LOCATE WATER SERVICE NEAR THE CENTER OF LOT
2. MINIMUM COVER FOR WATER MAIN SHALL BE 30" (36" PREFERRED)



PLAN
NO SCALE

- ① ANGLE BALL TYPE CURB STOP (MULLER B24258 MN BY CTS 110 COMPRESSION, OR APPROVED EQUAL). FOR SERVICE LARGER THAN 2", USE RESILIENT WEDGE GATE VALVE.
- ② WATER METER, PIT ERT MODULE, AND UNIVERSAL ROD MOUNT ADAPTOR BY CITY OF GRIDLEY.
- ③ STRAIGHT METER COUPLING (FORD C38 OR APPROVED EQUAL).
- ④ FULL PORT BRONZE BALL VALVE (WATTS SERIES B-6080 OR APPROVED EQUAL).
- ⑤ 6" LONG BRASS NIPPLE, THREADED BOTH ENDS.
- ⑥ COMPRESSION COUPLING (ROMAC INDUSTRIES, INC. STYLE "511", SMITH BLAIR "411" TWO-BOLT STYLE OR APPROVED EQUAL).
- ⑦ MINIMUM 6" OF 3/4" CRUSHED ROCK
- ⑧ "W" STAMPED INTO THE TOP OF CURB OVER THE SERVICE LINE.
- ⑨ 1" DIA. PE3408 POLYETHYLENE SERVICE PIPE WITH DIRECT BURIAL NO. 12 AWG SOLID COPPER INSULATED TRACER WIRE.
- ⑩ FULL-BODY SUPPORT SADDLE (FORD FS 202 OR EQUAL) ON PVC C900 WATER MAIN. USE STANDARD DOUBLE STRAP SADDLE ON OTHER PIPE MATERIALS.
- ⑪ BALL-TYPE COMPRESSION CORPORATION STOP (MULLER B25028 MX BY CTS 110 COMPRESSION, OR APPROVED EQUAL)
- ⑫ FIBERLITE VALVE BOX (CHRISTY FL 30 WITH T LID) OR APPROVED EQUAL. A CONCRETE METER BOX WITH TRAFFIC LID (CHRISTY B16) OR APPROVED EQUAL SHALL BE INSTALLED IN ALL TRAFFIC AREAS.
- ⑬ WATER SERVICE LARGER THAN 2" SHALL BE PVC OR DUCTILE IRON PIPE WITH DIRECT BURIAL NO. 12 AWG SOLID COPPER INSULATED TRACER WIRE.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2007-R-055
DATE: AUGUST 18, 2008

**PUBLIC WORKS
STANDARD NO.**

W4

DES: H.L.V. DRWN: P.W.R.
CHK: B.A.N. DATE: JULY, 2008
APPROVED:

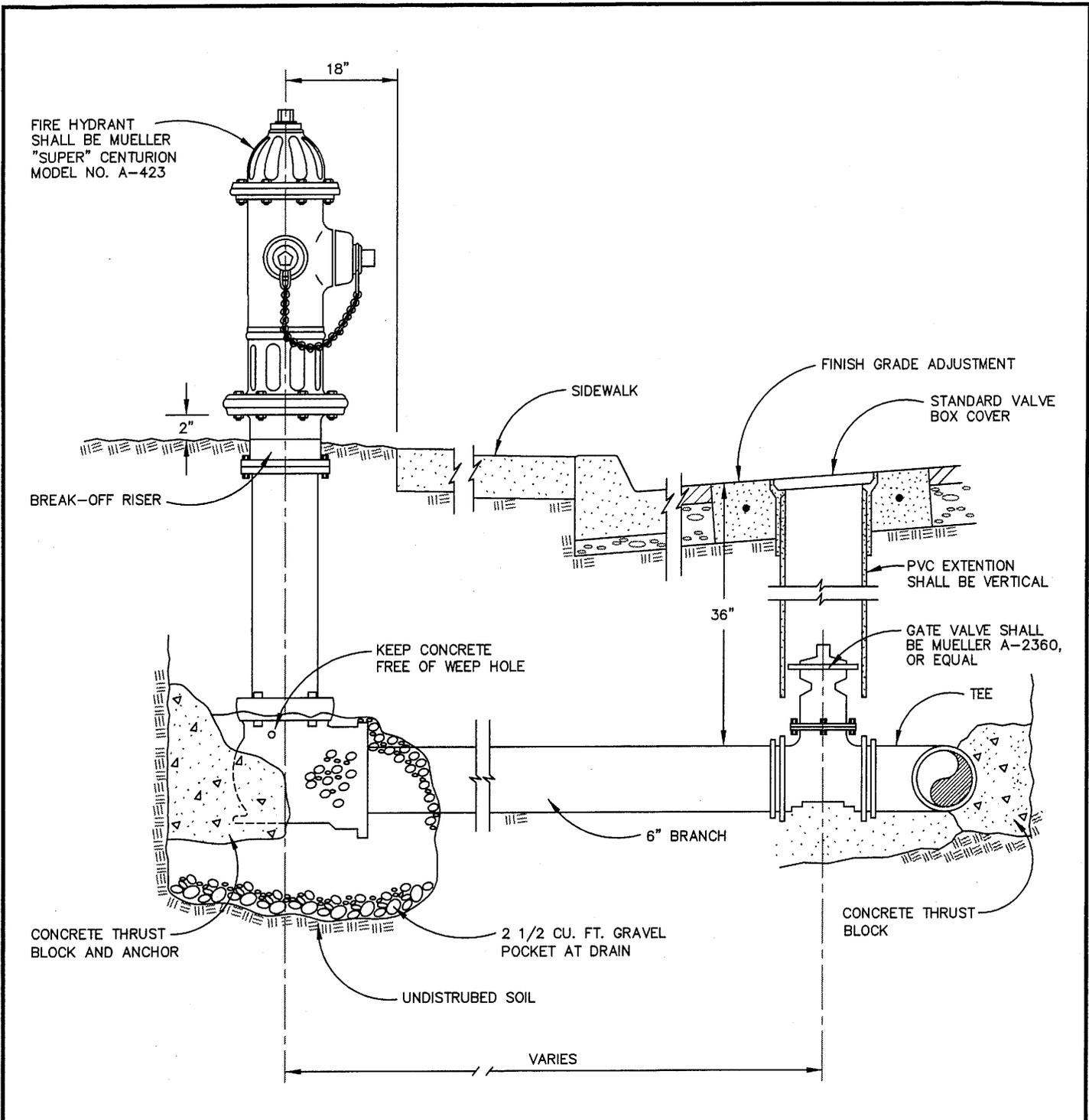
**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS**

DWG. NO.

Paul A. Neal 33381
CITY ENGINEER RCE NO.

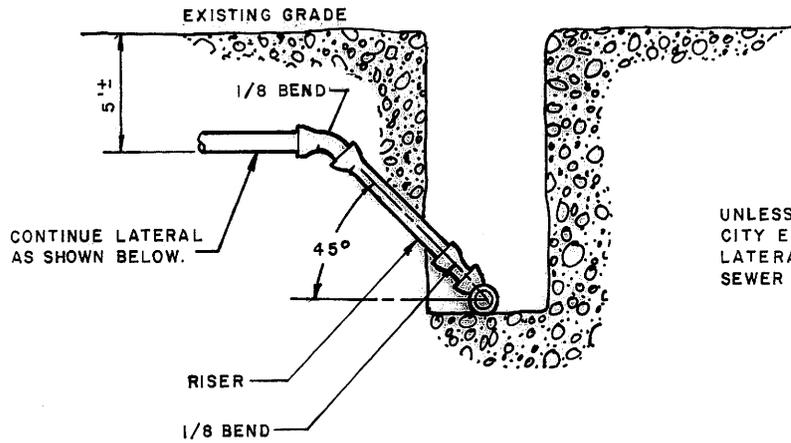
WATER SERVICES

34



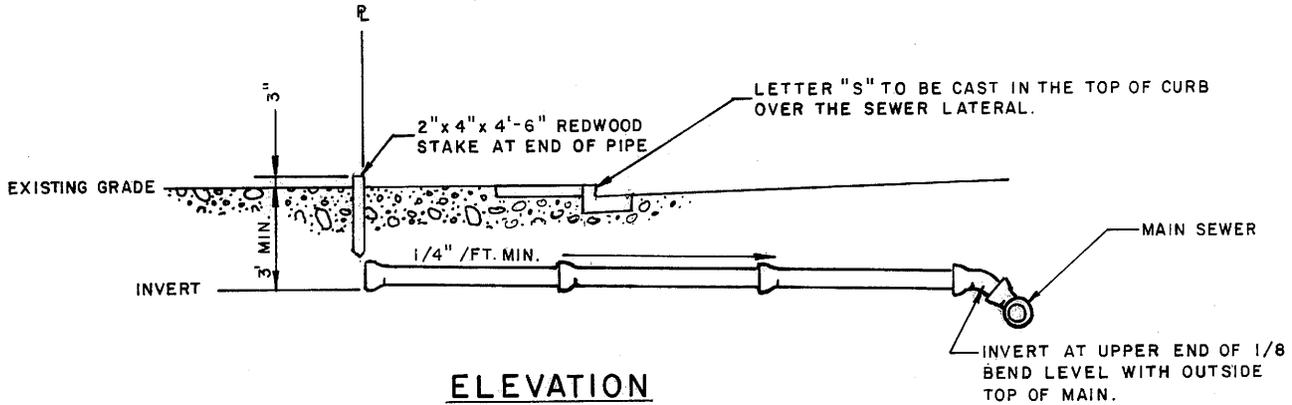
NOTE:
 THRUST BLOCKS BEHIND TEES AND HYDRANTS SHALL PROVIDE A MINIMUM BEARING OF 4 SQ. FT. AGAINST UNDISTURBED SOIL.

APPROVED BY CITY COUNCIL RESOLUTION NO. 2007-R-055 DATE: AUGUST 18, 2008	PUBLIC WORKS STANDARD NO. W5
DES: H.L.V. DRWN: P.W.R. CHK: B.A.N. DATE: JULY, 2008 APPROVED: <i>Bruce A. Nair</i> 33381 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS STANDARD FIRE HYDRANT INSTALLATION DWG. NO. 35

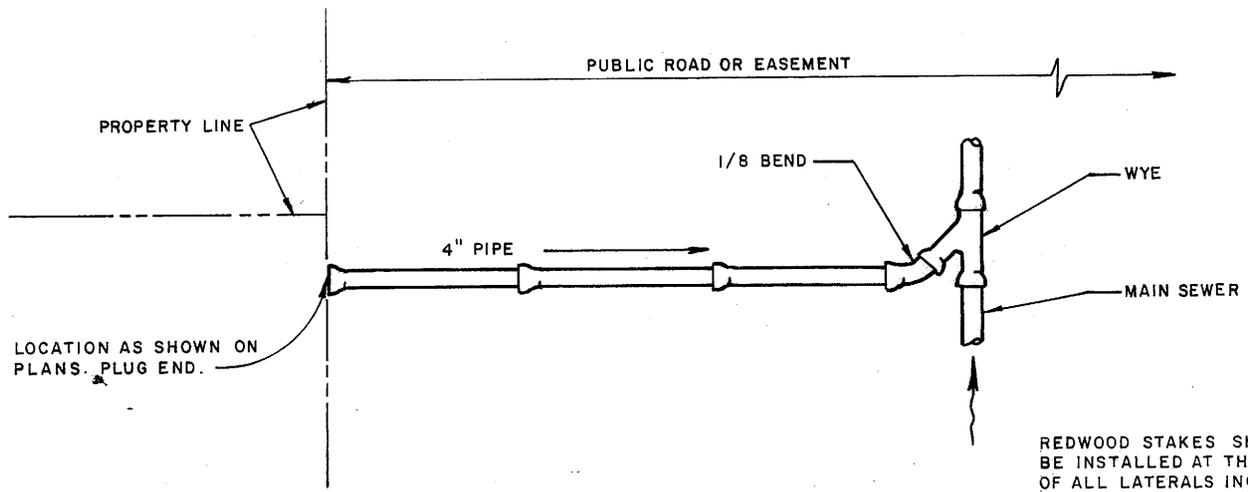


UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER, INSTALL RISERS FOR LATERALS, WHERE DEPTH OF MAIN SEWER EXCEEDS 8'.

RISER DETAIL
(FOR DEEP SEWERS)



ELEVATION



PLAN

APPROVED BY CITY COUNCIL
RESOLUTION NO.50
DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
STANDARD NO SSI**

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Kelly 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TYPICAL LATERAL
SEWER DETAILS**

DWG. NO.

37

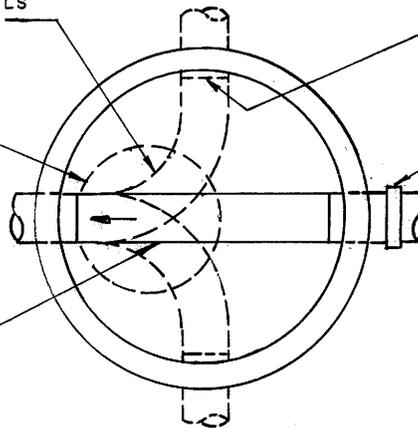
FORM SMOOTH AND UNIFORM CHANNELS IN INVERT TO MEET ENDS OF PIPES. FINISH TO BE EQUIVALENT TO STEEL TROWEL FINISH.

POSITION OF COVER RELATIVE TO INVERT

END PIPE 2" FROM WALL. TYPICAL FOR JUNCTION AND ANGLE MANHOLES.

JOINT IN PIPE REQUIRED WITHIN 2' OF MANHOLE.

EXTEND PIPE THROUGH MANHOLE AT LINE MANHOLES. CUT OUT TOP OF PIPE AND PLACE CONCRETE TO COMPLETE INVERT.



PLAN OF INVERT

#3 REBAR

SET CAST IRON FRAME IN 1:2 CEMENT MORTAR.

21" MAX.
24" DIA. PORTION

CONCRETE COLLARSEE STANDARD SS5

36" MAX.
30" MIN.

GRADE RINGS. MINIMUM OF ONE AND MAXIMUM OF THREE. KENT SEAL OR MORTAR JOINT, SEE SPECIFICATIONS.

PRECAST RC ECCENTRIC CONE. SET COVER DIRECTLY OVER THE DOWNSTREAM SEWER.

NOTE: CONCRETE FOR MANHOLE CONSTRUCTION SHALL BE CLASS "B". PRIME ALL JOINTS AND SET IN DOUBLE BEAD OF KENT SEAL JOINT SEALING COMPOUND OR EQUAL.

4" MIN.

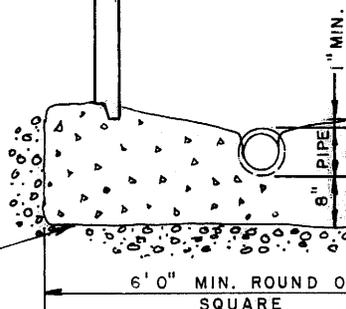
48" DIA.

PRECAST RC RISER SECTIONS.

USE CIRCULAR METAL FORM TO SHAPE FULL DEPTH GROOVE IN BASE TO MATCH TONGUE ON RISER SECTION.

PLACE CAST-IN-PLACE BASE AGAINST UNDISTURBED SOIL OR USE FORM.

FIRM UNDISTURBED MATERIAL OR CL. 2 AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION



TYPICAL SECTION

INVERT SHOWN ROTATED 90°

APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO SS2

DES: _____ DWN: L.R.W.

CHK: _____ DATE: _____

APPROVED:

Ray D. Rice 18036

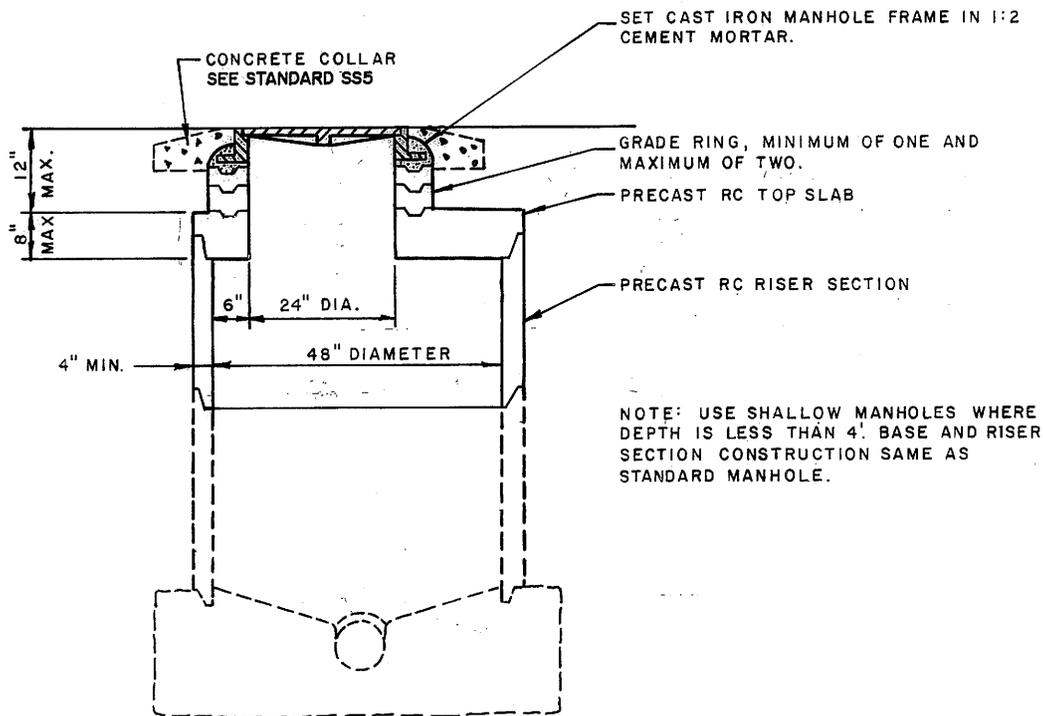
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

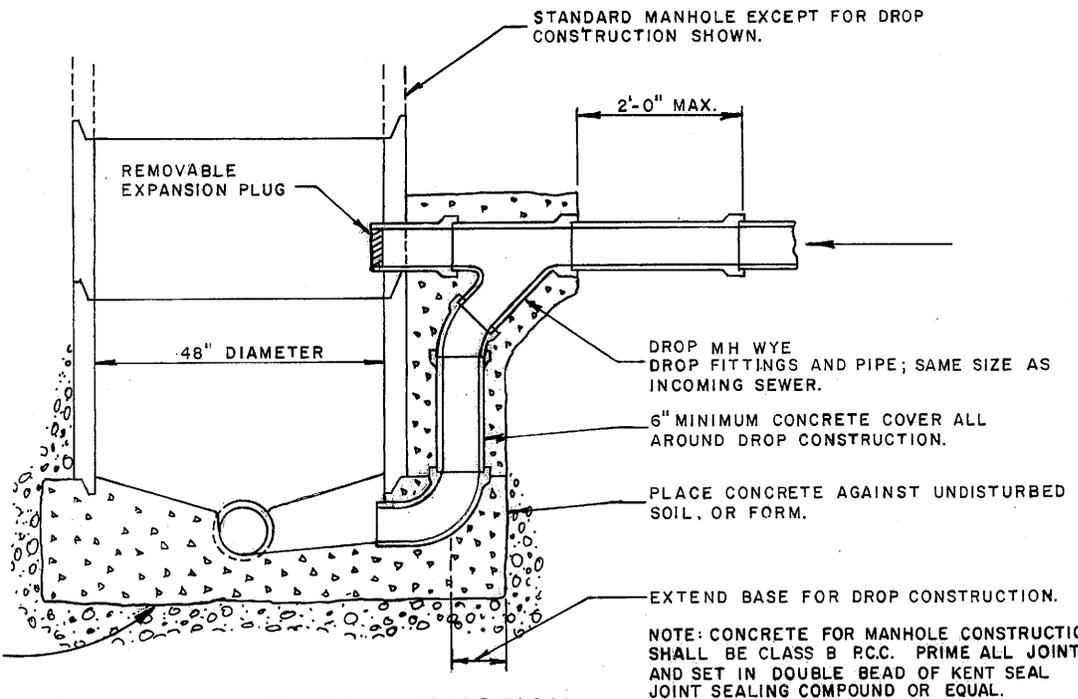
STANDARD MANHOLE

DWG. NO.

38



SHALLOW MANHOLE



DROP MANHOLE CONSTRUCTION

NOTE:
DROP CONSTRUCTION
REQUIRED WHERE
INCOMING SEWER IS
2' OR MORE ABOVE
MAIN SEWER INVERT.

FIRM UNDISTURBED MATERIAL
OR CL. 2 AGGREGATE BASE
COMPACTED TO 95%
RELATIVE COMPACTION

NOTE: CONCRETE FOR MANHOLE CONSTRUCTION
SHALL BE CLASS B R.C.C. PRIME ALL JOINTS
AND SET IN DOUBLE BEAD OF KENT SEAL
JOINT SEALING COMPOUND OR EQUAL.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

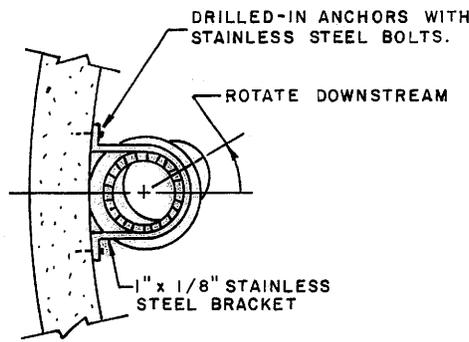
**PUBLIC WORKS
STANDARD NO SS3**

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Roller 18036
CITY ENGINEER RCE NO.

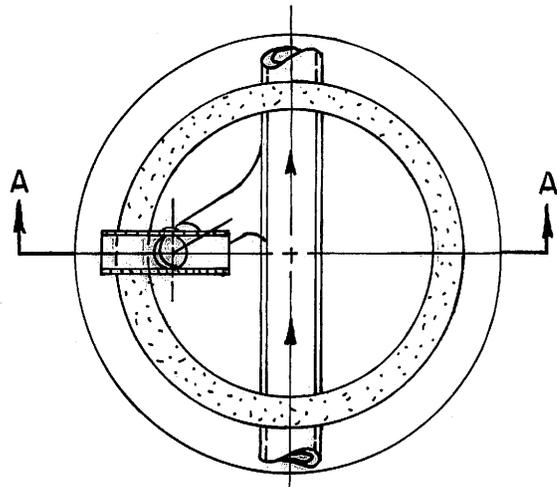
**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
SHALLOW MANHOLE AND
DROP MANHOLE CONSTRUCTION**

DWG. NO.

39



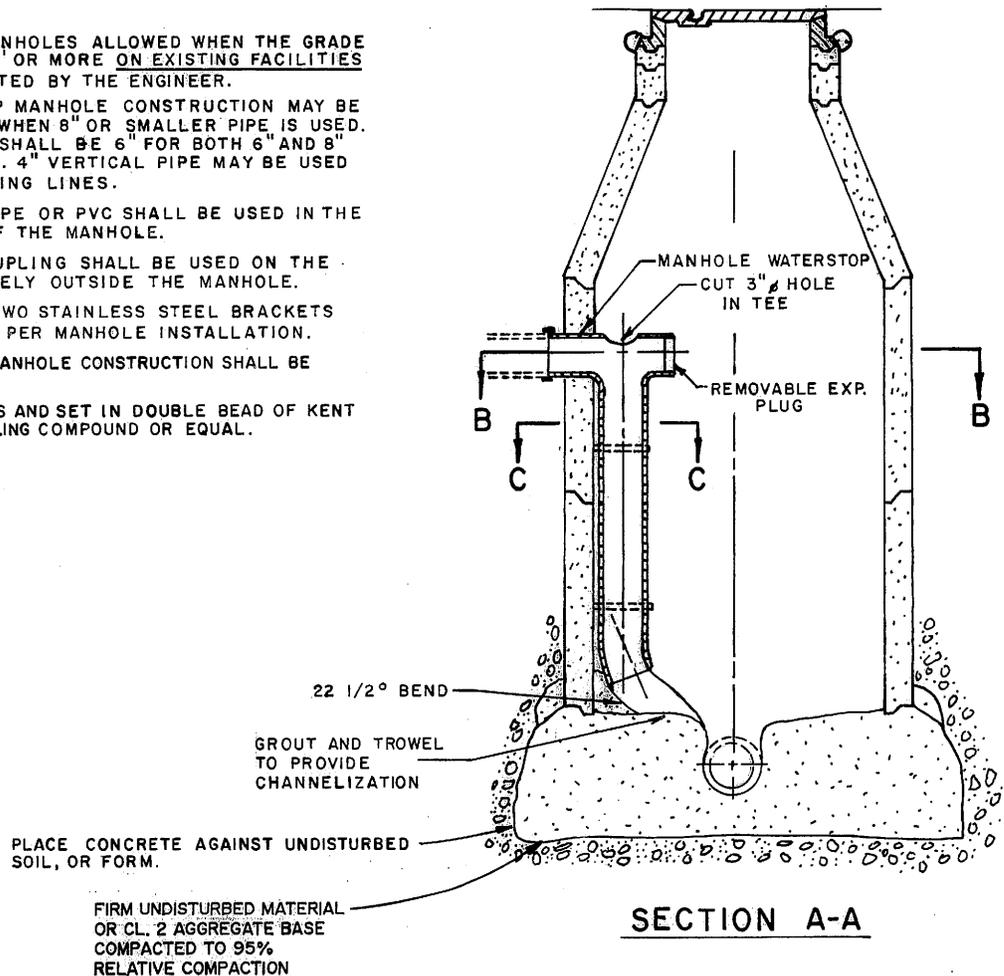
SECTION C-C



SECTION B-B

NOTES:

1. INSIDE DROP MANHOLES ALLOWED WHEN THE GRADE DIFFERENCE IS 2' OR MORE ON EXISTING FACILITIES OR WHEN DIRECTED BY THE ENGINEER.
2. THIS TYPE DROP MANHOLE CONSTRUCTION MAY BE UTILIZED ONLY WHEN 8" OR SMALLER PIPE IS USED. VERTICAL PIPE SHALL BE 6" FOR BOTH 6" AND 8" INCOMING LINES. 4" VERTICAL PIPE MAY BE USED FROM 4" INCOMING LINES.
3. DUCTILE IRON PIPE OR PVC SHALL BE USED IN THE DROP SECTION OF THE MANHOLE.
4. A FLEXIBLE COUPLING SHALL BE USED ON THE JOINT IMMEDIATELY OUTSIDE THE MANHOLE.
5. A MINIMUM OF TWO STAINLESS STEEL BRACKETS SHALL BE USED PER MANHOLE INSTALLATION.
6. CONCRETE FOR MANHOLE CONSTRUCTION SHALL BE CLASS B P.C.C.
7. PRIME ALL JOINTS AND SET IN DOUBLE BEAD OF KENT SEAL JOINT SEALING COMPOUND OR EQUAL.



SECTION A-A

APPROVED BY CITY COUNCIL
 RESOLUTION NO 50
 DATE: SEPTEMBER 16, 1991

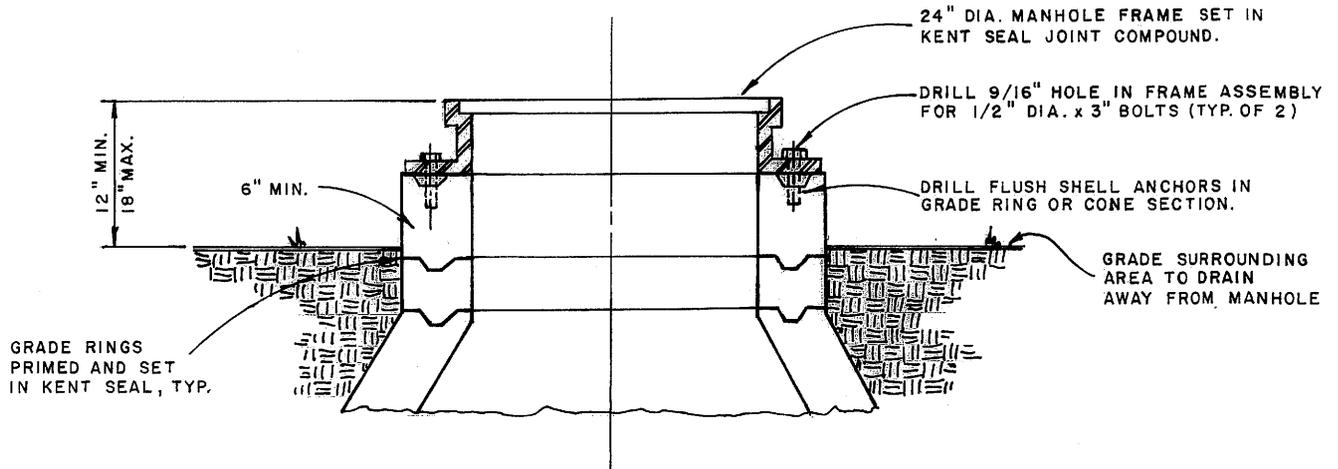
**PUBLIC WORKS
 STANDARD NO SS 4**

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Pelt 18036
 CITY ENGINEER RCE NO.

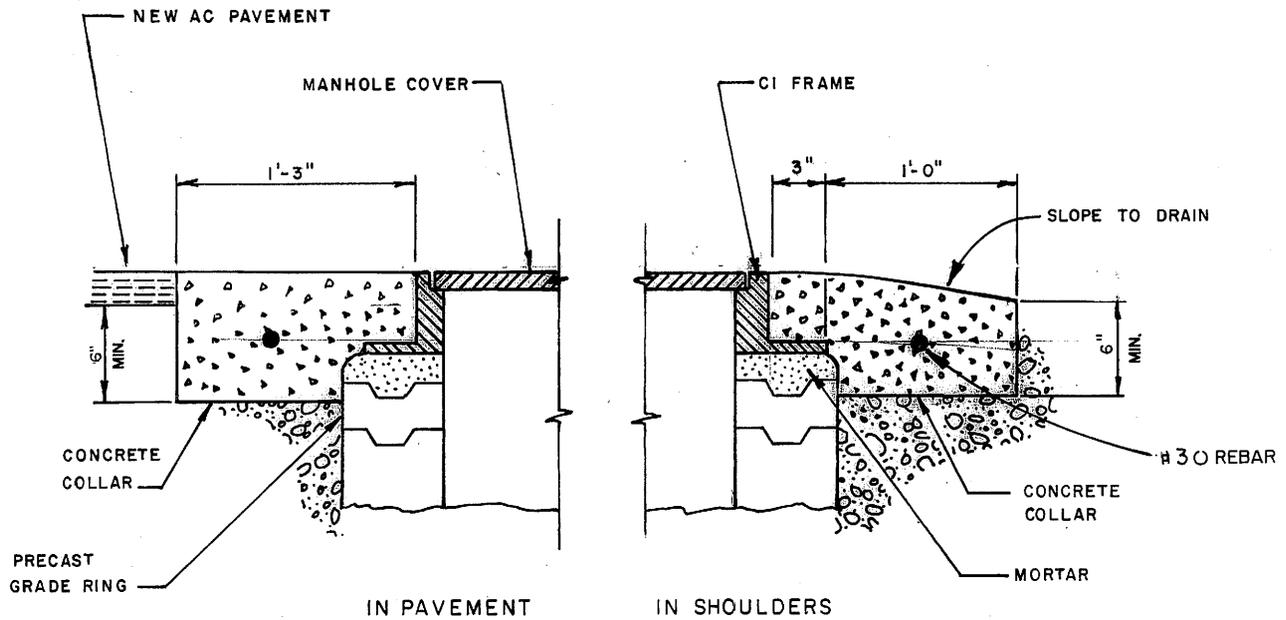
**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 STANDARD INSIDE
 DROP MANHOLE**

DWG. NO.

40



MANHOLES IN UNIMPROVED LOCATIONS



NOTE: ALL CONCRETE SHALL BE CLASS B P.C.C. WITH 1/2 LB. PER CY LAMPBLACK

COVER SETTING DETAIL FOR MANHOLES IN ROADWAYS

APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
STANDARD NO SS5**

DES: _____ DWN: _____ L.R.W. _____
CHK: _____ DATE: _____
APPROVED:
Ray D. Pelt
CITY ENGINEER RCE NO. 18036

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD SEWER
SYSTEM DETAILS**

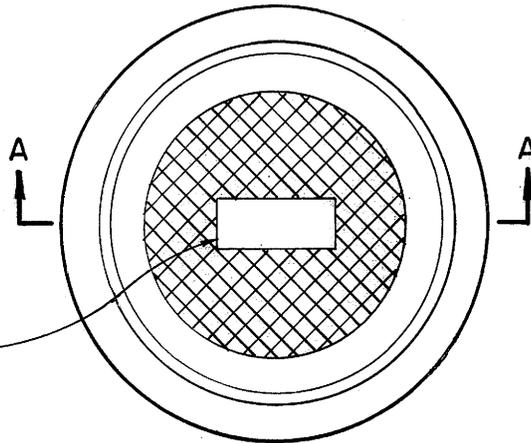
DWG. NO.

41

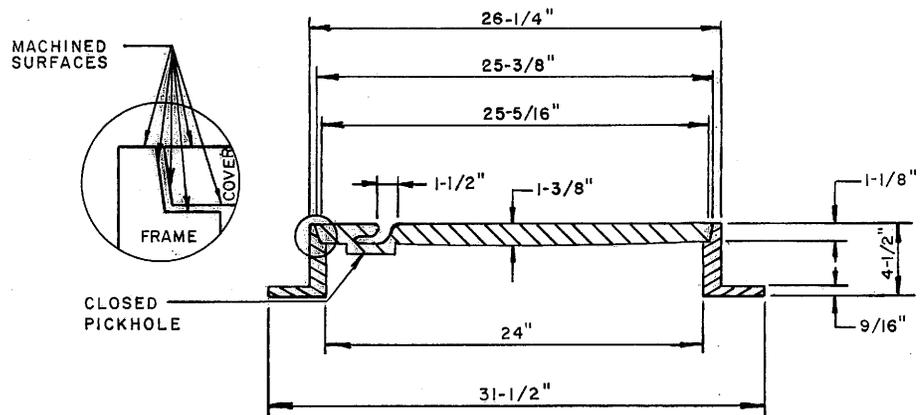
**ACCEPTABLE
MANUFACTURERS**

PHOENIX P-1090
 SBF 1900
 D & L A-1024

APPROPRIATE
 UTILITY LABEL:
 SANITARY SEWER OR
 STORM DRAIN.



PLAN



SECTION A

COVER 130 LBS. (MIN.)
 FRAME 138 LBS. (MIN.)

NOTES:

1. FRAME AND COVER FULLY MACHINED ON SURFACES AS SHOWN FOR PERFECT NO-ROCK FIT.
2. STANDARD COVER MARKINGS AVAILABLE: "SANITARY SEWER" OR "STORM DRAIN". CASTING SHALL BE ORDERED WITH APPROPRIATE MARKING.
3. CASTINGS SHALL BE DIPPED IN ASPHALT PAINT.
4. WATERTIGHT COVER AVAILABLE WITH R/G DESIGNATION.
5. ALL PARTS OF ACCEPTABLE COVER ASSEMBLIES ARE INTERCHANGEABLE.
6. MANHOLE COVER SHALL BE SOLID LID WITH BLIND PICKHOLE TYPICAL.

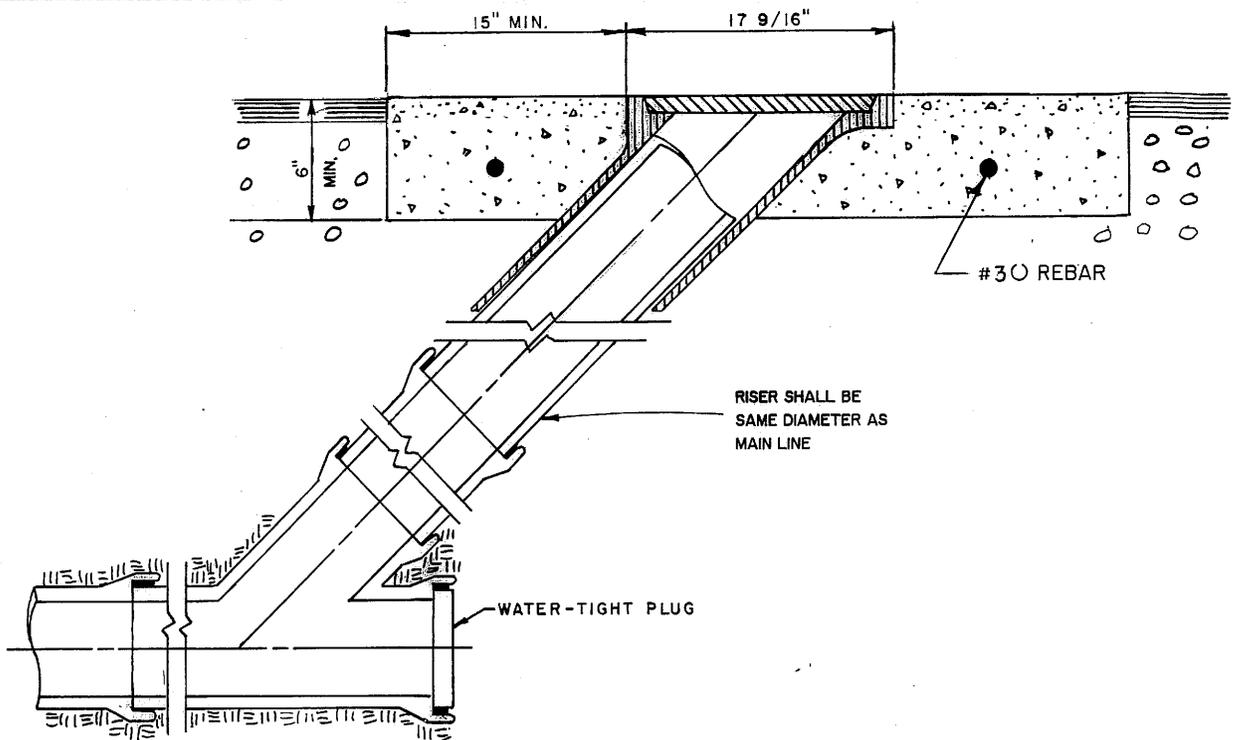
APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
 STANDARD NO SS6**

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Pelt 18036
 CITY ENGINEER RCE NO.

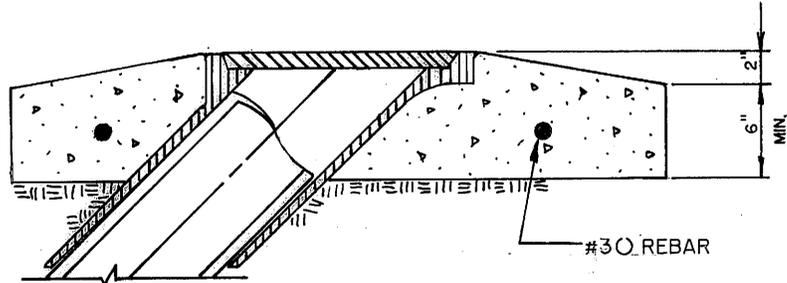
**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 24" MANHOLE FRAME
 & COVER ASSEMBLY**

DWG. NO.
42



**PAVED ALLEYS
AND SHOULDERS**

	6" MAIN	8" MAIN
PHOENIX	P-7004	P-7003
SBF	1249	
D & L	H-6521	H-6530



**UNPAVED ALLEYS
AND SHOULDERS**

NOTES:

1. ALL WORK TO BE DONE AND ALL MATERIALS SUPPLIED SHALL CONFORM TO THE GRIDLEY PUBLIC WORKS CONSTRUCTION STANDARDS.
2. EIGHTH (1/8) BEND MAY BE USED IN PLACE OF WYE WITH THE APPROVAL OF THE CITY ENGINEER.
3. ALL CONCRETE SHALL BE CLASS B P.C.C.
4. CONCRETE COLLAR AROUND STREET CASTING SHALL BE OVAL IN SHAPE AS IN CASTING.

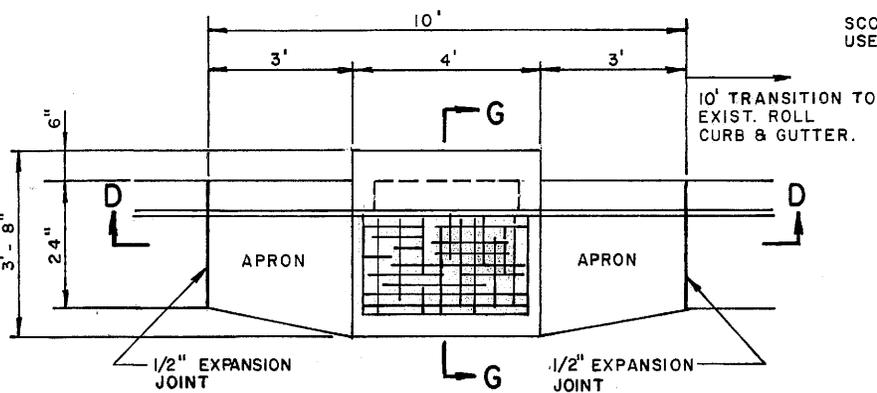
APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
STANDARD NO SS7**

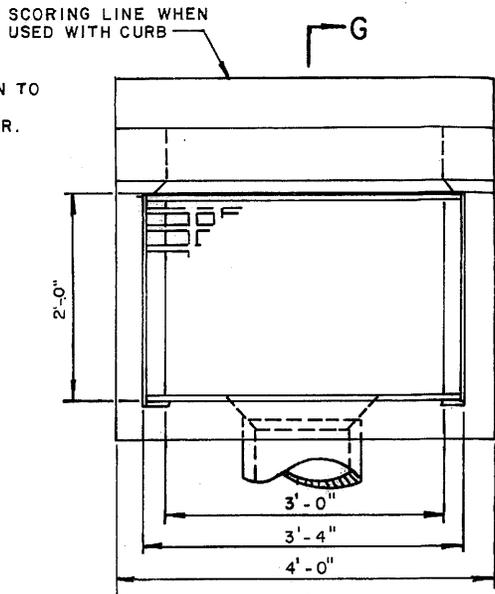
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rolfe 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
DETAIL OF RODHOLE
INSTALLATION.**

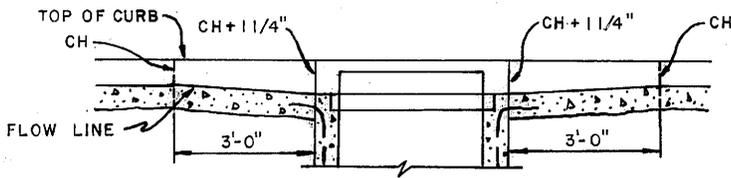
DWG. NO.
43



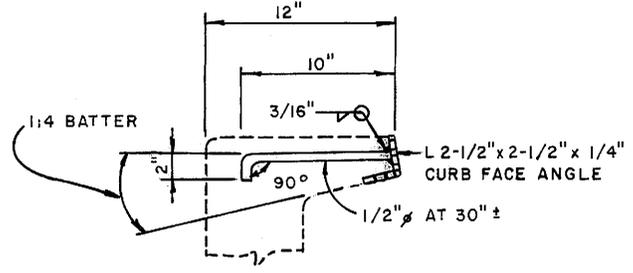
PLAN



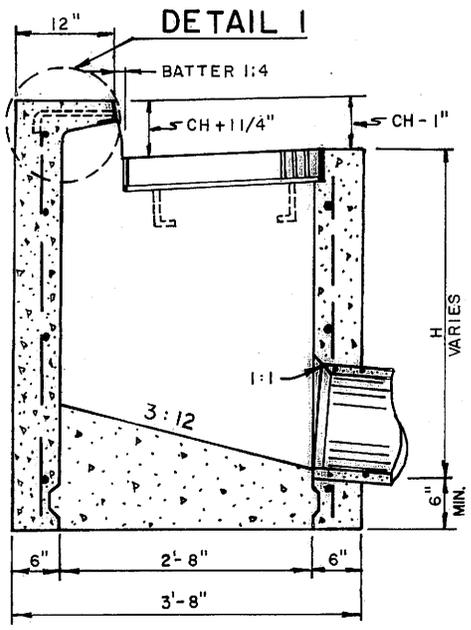
PLAN



SECTION D-D



DETAIL 1



SECTION G-G

GENERAL NOTES:

1. "H" SHALL NOT EXCEED 8' MAXIMUM.
2. REINFORCING STEEL IN WALLS SHALL BE NO. 4 BARS AT 18" ± CENTERS PLACED 1 1/2" CLEAR TO INSIDE OF BOX UNLESS OTHERWISE SHOWN.
3. FRAME AND GRATE SHALL BE CALTRANS TYPE 24-B OR EQUAL, GALVANIZED.
4. PIPE (S) CAN BE PLACED IN ANY WALL.
5. CURB SECTION SHALL MATCH ADJACENT CURB.
6. BASIN FLOORS SHALL HAVE WOOD TROWEL FINISH AND A MINIMUM SLOPE OF 3:12 FROM ALL DIRECTIONS TOWARD OUTLET PIPE.
7. ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED.
8. WHEN INSTALLED IN EXISTING ROLLED CURB & GUTTER WARP TO VERTICAL CURB IN 10' TRANSITION.
9. WHEN APRON IS CONSTRUCTED WITH DROP INLET EXTEND NO. 4 SIDEWALL REBAR 12" INTO TAPERED GUTTER PAN.
10. DELETE APRON IN NON CURB AND GUTTER AREAS.
11. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

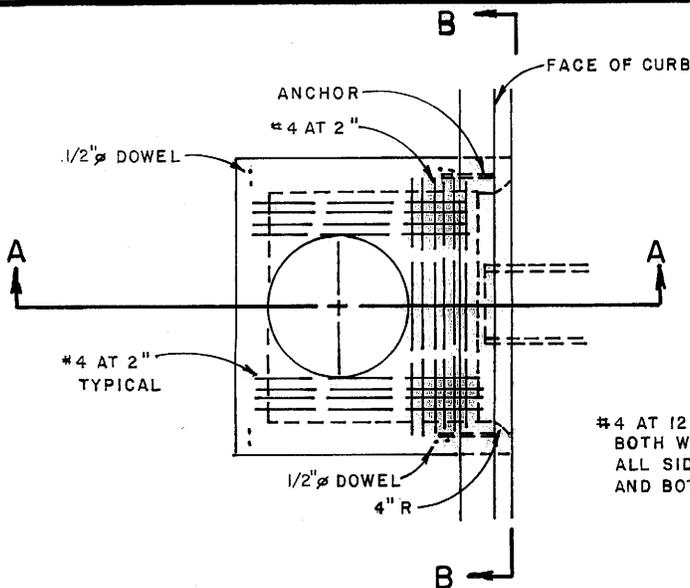
APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO SD 2

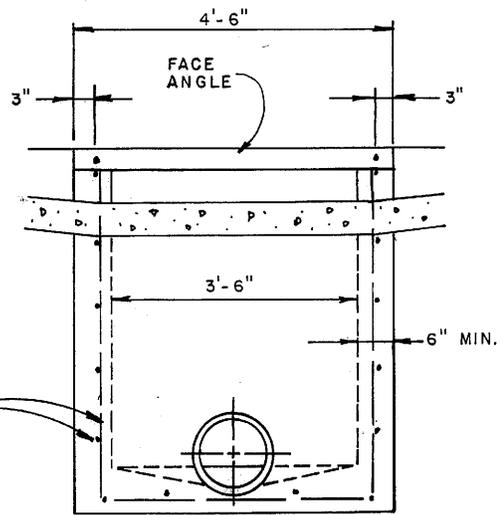
DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Pelt 12036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TYPE "GO" DROP INLET

DWG. NO.
45

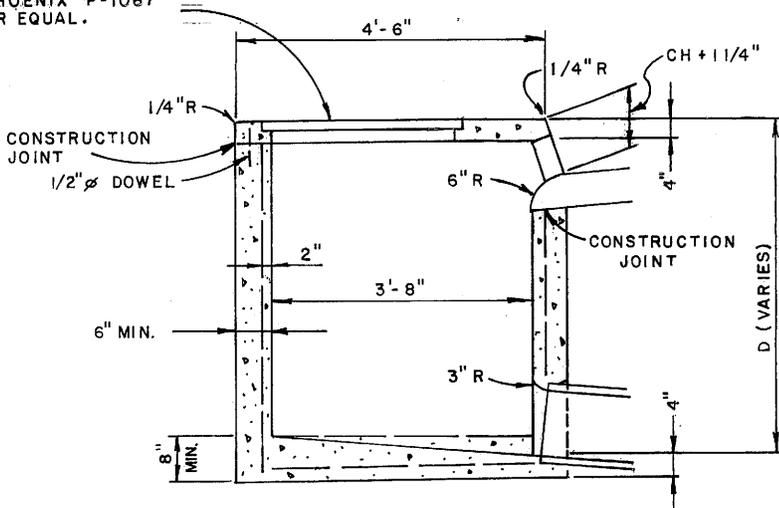


PLAN

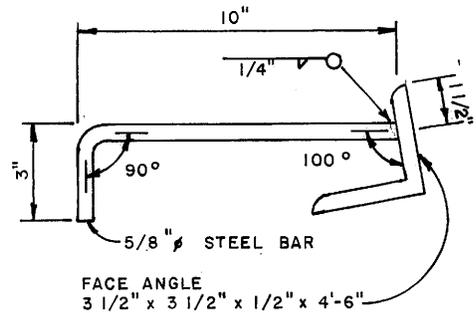


SECTION B-B

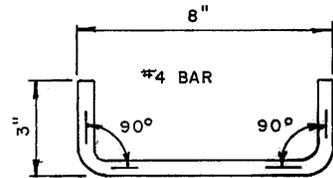
FRAME & COVER
SBF 1967
PHOENIX P-1067
OR EQUAL.



SECTION A-A



FACE ANGLE & ANCHOR DETAIL



DOWEL DETAIL

NOTES:

1. CONNECTION PIPES AND OUTLET PIPES MAY BE PLACED IN ANY POSITION AROUND THE WALLS.
2. CURVATURE OF THE LIP AND SIDE WALLS AT GUTTER OPENING SHALL BE FORMED BY CURVED FORMS.
3. CURB FACE HEIGHT OF DROP INLET SHALL BE THAT OF THE EXISTING CURB PLUS 1 1/4".
4. INSTALL 3'-0" LONG TRANSITION SECTION EACH SIDE OF INLET TO DEPRESS THE GUTTER FLOWLINE 1 1/4" AT THE INLET.
5. MINIMUM CLEAR SPACING BETWEEN FACE OF CONCRETE AND REINFORCING STEEL TO BE 1 1/2". MAXIMUM DEPTH "D" SHALL BE 8'-0".
6. FACE ANGLE SHALL BE GALVANIZED AFTER FABRICATION ALL SURFACES SHALL BE FREE OF RUST AND OIL AND NEATLY SOLDERED.
7. WHEN PRECAST CONCRETE BOXES ARE FURNISHED, THE WALL THICKNESS MAY BE 4" WITH REINFORCEMENT AND THE FACE ANGLE MAY BE 3/8" STOCK.
8. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

STEEL LIST FOR TOP	
DESCRIPTION	REQ'D
#4 BAR 4'-4" LONG	7
#4 BAR 3' 11" LONG	8
#4 BAR 1'-7" LONG	3
FACE ANGLE 4'-6"	1
DOWELS	4
FRAME & COVER	1

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

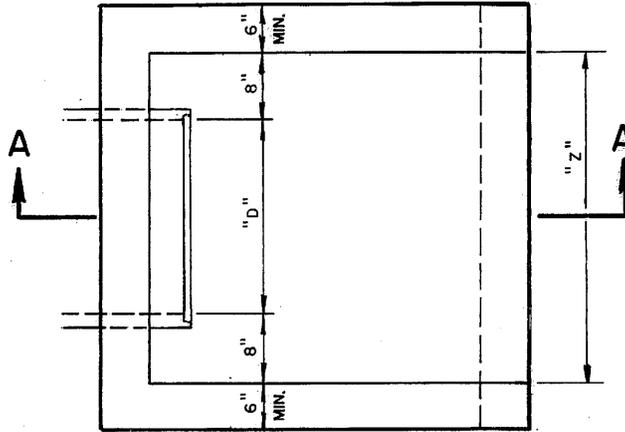
**PUBLIC WORKS
STANDARD NO SD 3**

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Palle 18036
CITY ENGINEER RCE NO.

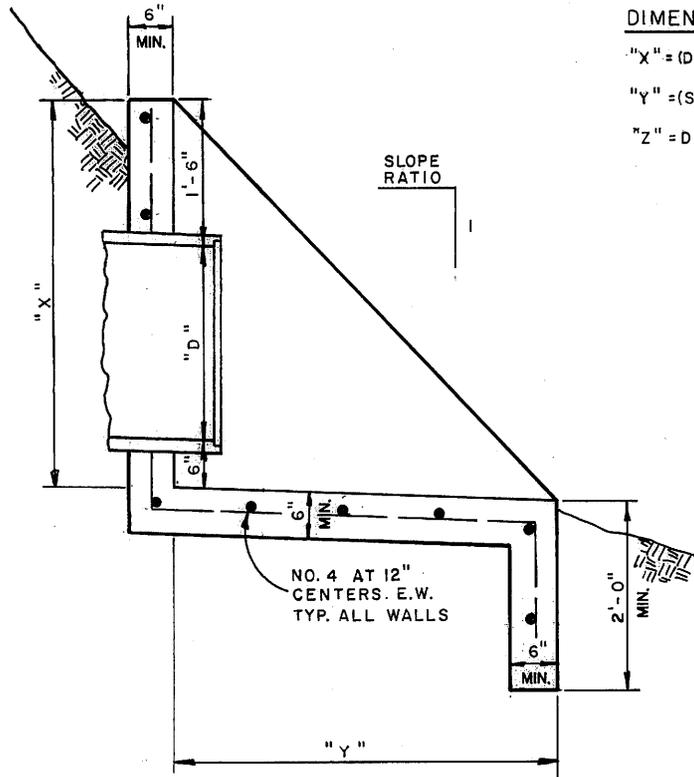
**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
DROP INLET
TYPE 2**

DWG. NO.

46



PLAN VIEW



DIMENSIONS:

"X" = (D + 2')

"Y" = (SLOPE RATIO)(D + 2')

"Z" = D + (1' - 4')

SECTION A-A

APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
 STANDARD NO SD 4**

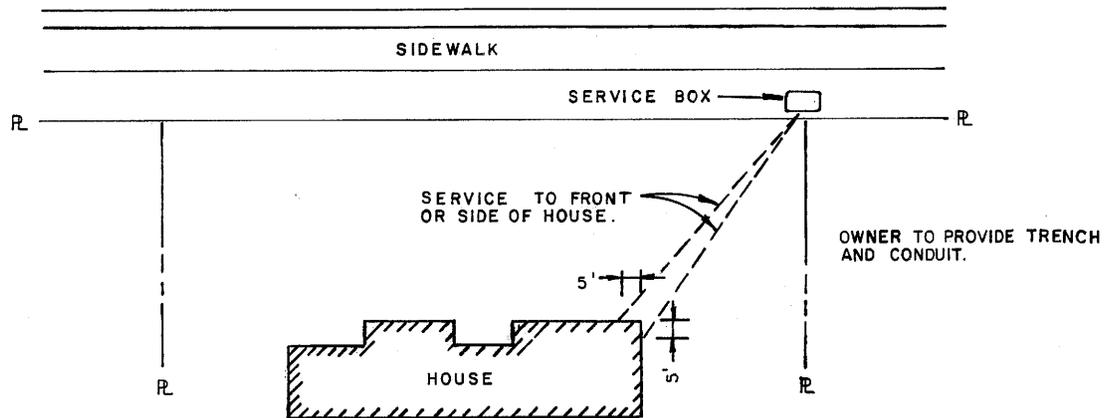
DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Rolfe 18036
 CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 STANDARD HEADWALL
 STRUCTURAL DETAILS**

DWG. NO.

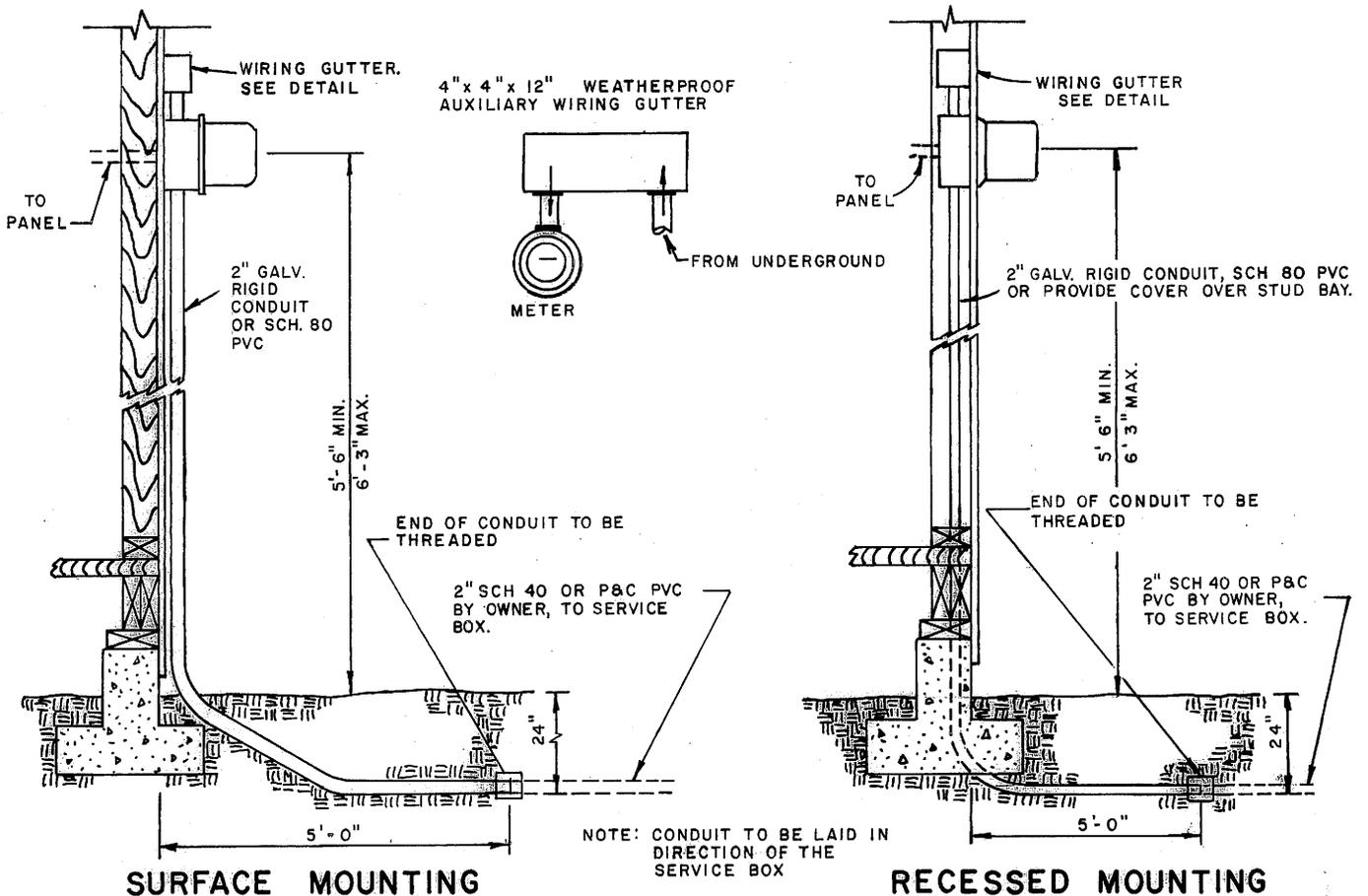
47

TYPICAL SERVICE LOCATION



NOTES:

1. CITY OF GRIDLEY WILL INFORM OWNER PRIOR TO START OF CONSTRUCTION WHICH CORNER OF THE BUILDING THE SERVICE WILL BE PROVIDED.
2. CITY OF GRIDLEY TO INSTALL SERVICE TO THE CORNER OF THE BUILDING IN TRENCH AND CONDUIT PROVIDED BY OWNER.
3. BUILDING SWEEP SHALL BE DIRECTED TOWARD SERVICE BOX.
4. ALL CONDUIT INSTALLED BELOW GROUND SHALL BE PLASTIC.



APPROVED BY CITY COUNCIL
 RESOLUTION NO.50
 DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
 STANDARD NO E I**

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Rolfe 18036
 CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 TYPICAL SERVICE &
 METER LOCATION**

DWG. NO.

48

SECONDARY OR SERVICE RISER REQUIREMENTS

- 1-10'-0" GALV. RISER (2" OR 4")
- 1-30" RADIUS SWEEP (2" OR 4")
- 6-1/2" x 4" LAG SCREWS
- 1'- GALV. COUPLING (2" OR 4")
- 1'- PVC-GALV. PIPE ADAPTER
- 25'- SERVICE WIRE COILED ABOVE RISER TIED TO POLE
- 3- GALV. STRAPS PREFORMED-STRAPS SHALL BE HOT DIP GALVANIZED, 1/4" THICK BY 1 1/4" WIDE, ONE 9/16" DIAMETER HOLE (AFTER GALV.) AT EACH PRESENT END. ATTACHMENT WILL BE BY GALVANIZED 1/2" x 4" LAG SCREWS AT 3'-0" SPACING ON POLE. NO PLUMBER TAPE.

12 KV RISER REQUIREMENTS

SAME AS ABOVE WITH (4" OR 6") AND 36" MIN. RADIUS AS NOTED BELOW.

MINIMUM SWEEP RADII:

SECONDARY CONDUIT = 30"
PRIMARY CONDUIT = 36"

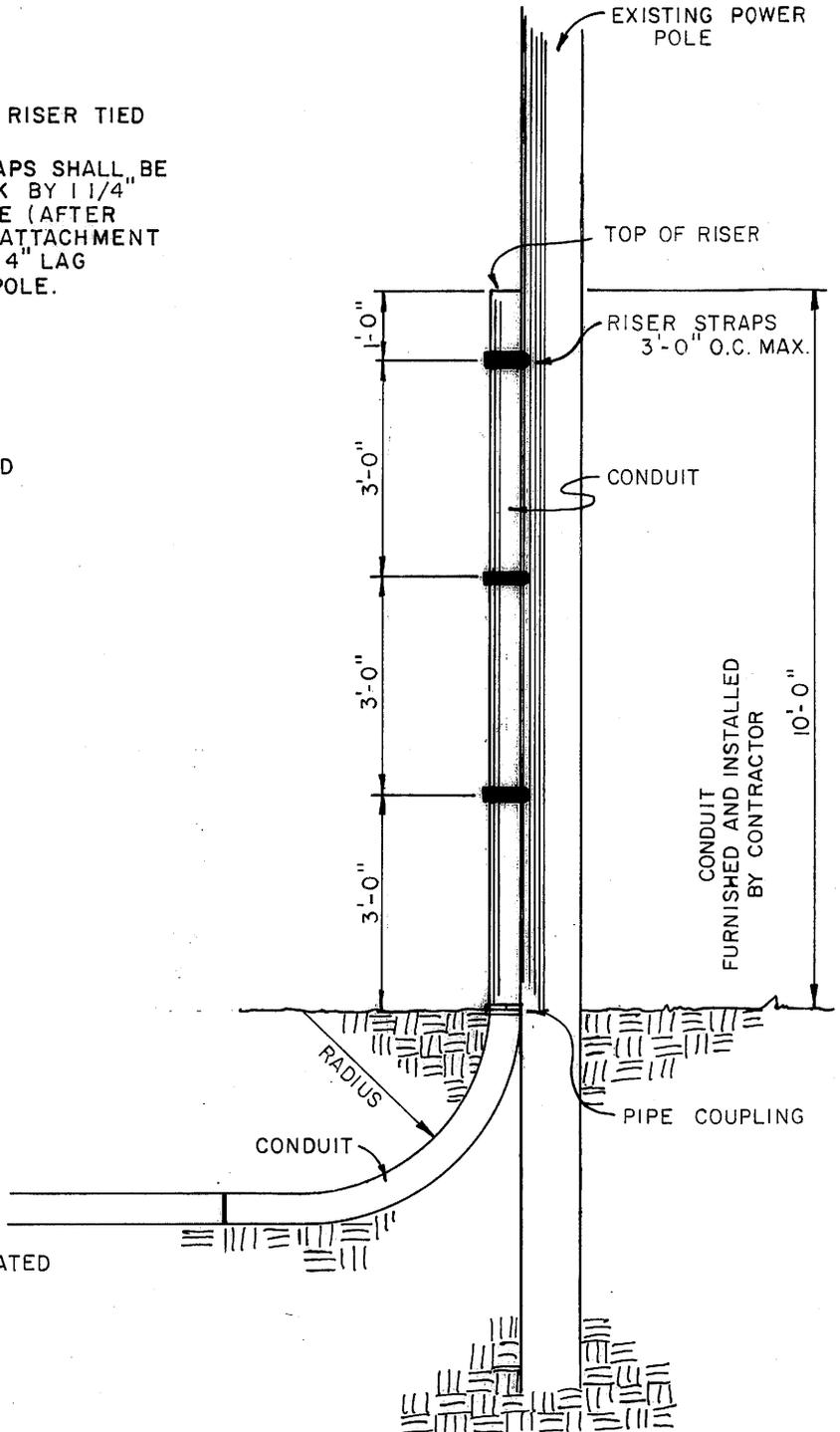
MINIMUM DEPTHS:

SECONDARY CONDUIT DEPTH 24"
PRIMARY CONDUIT DEPTH 30"
NOTE: FOR (2) ADJOINING 90° BENDS
RADII = 36" MIN. FOR (3) ADJOINING 90°
BENDS, STEEL SWEEPS WITH RADII = 36"
MIN. SHALL BE INSTALLED.

CONDUIT SIZE TO BE INDICATED

STRAP SUPPLIES:

ENGFER IRON WORK
KIN-LINE
MAYDWELL HARTZELL
PURCELL MFG. CO.



APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO E2

DES: _____ DWN: L.R.W.

CHK: _____ DATE: _____

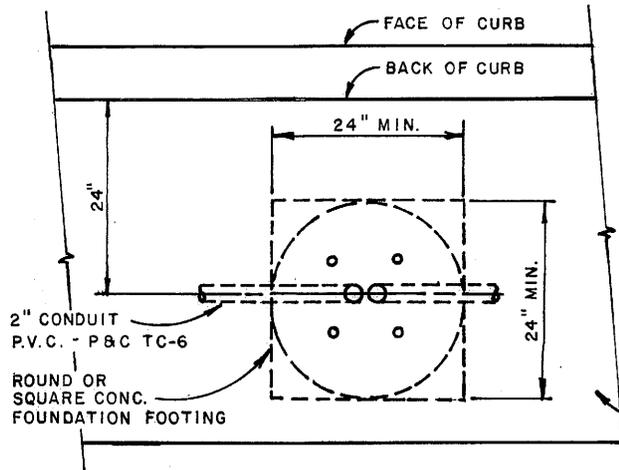
APPROVED:
Ray D. P... 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

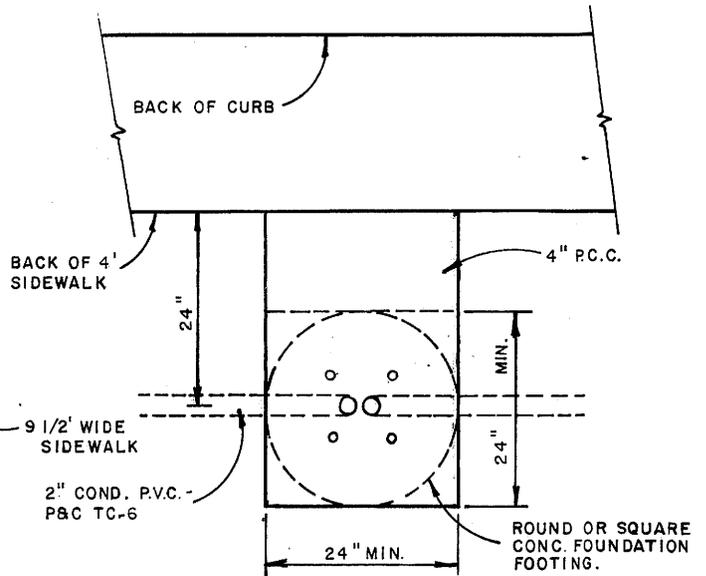
POLE RISER DETAIL

DWG. NO.

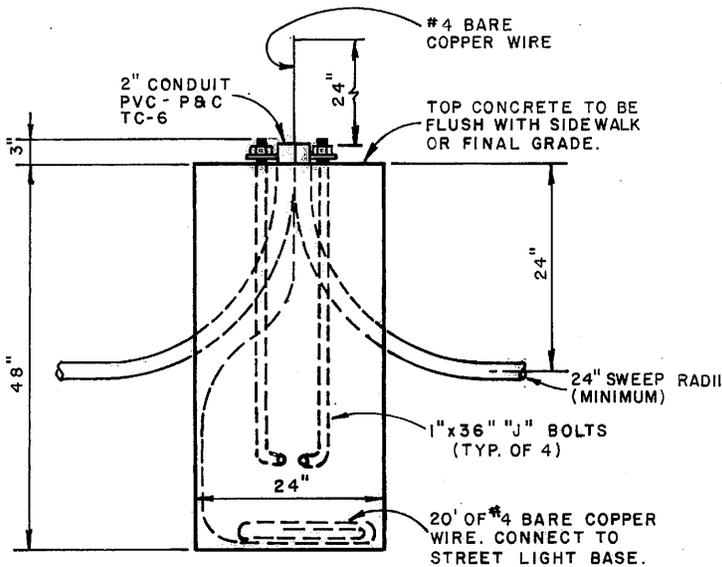
49



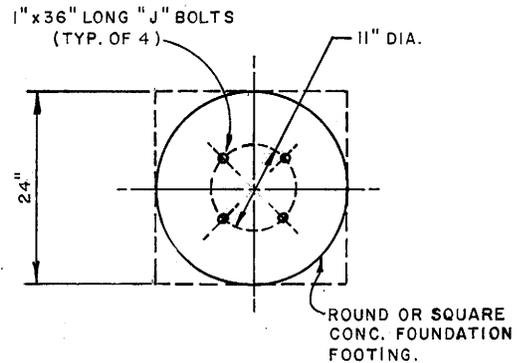
COMMERCIAL



RESIDENTIAL / SUBDIVISION



FOUNDATION



BOLT PATTERN

NOTES:

1. CITY OF GRIDLEY WILL LOCATE ALL STREET LIGHT BASES.
2. OWNER WILL INSTALL CONDUIT AND BASES AS SHOWN.
3. STREET LIGHTS SHALL BE 100 WATT HIGH PRESSURE SODIUM LIGHTS INSTALLED ON 25' TAPERED STEEL POLES WITH 8' ARMS APPROVED BY THE CITY ENGINEER.
4. ALL CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

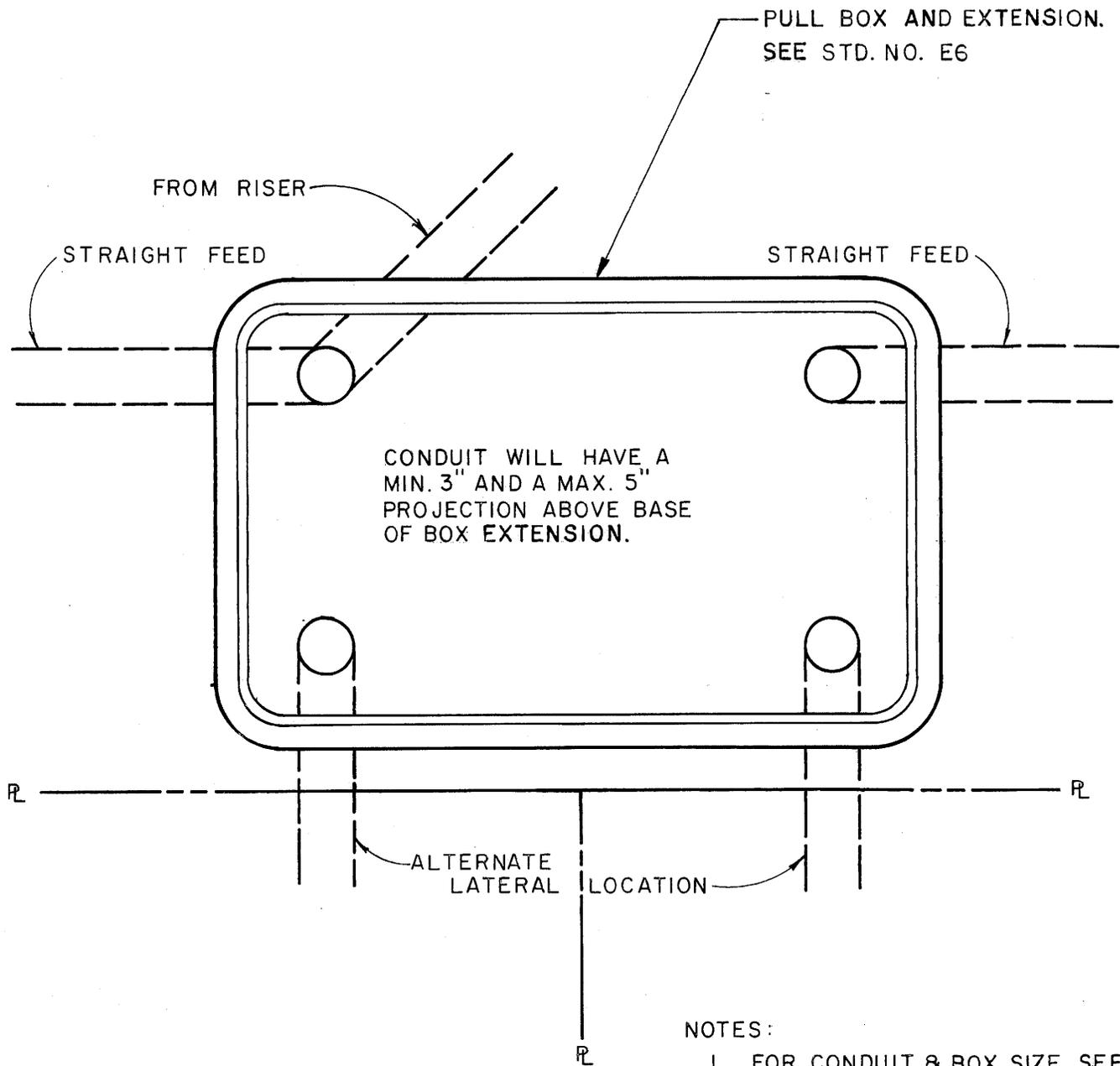
**PUBLIC WORKS
STANDARD NO E3**

DES: _____ DWN: _____ L.R.W. _____
CHK: _____ DATE: _____
APPROVED:
Ray D. Ralls 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TYPICAL STREET LIGHT
STANDARD BASE DETAIL**

DWG. NO.

50



NOTES:

1. FOR CONDUIT & BOX SIZE SEE PLANS & SPECS OR ATTACHED LETTER.
2. THERE SHALL BE A MAXIMUM OF FOUR (4) CONDUITS IN A BOX.
3. MINIMUM SWEEP RADII:
 PRIMARY COND. = 36"
 SECONDARY COND. = 30"

APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

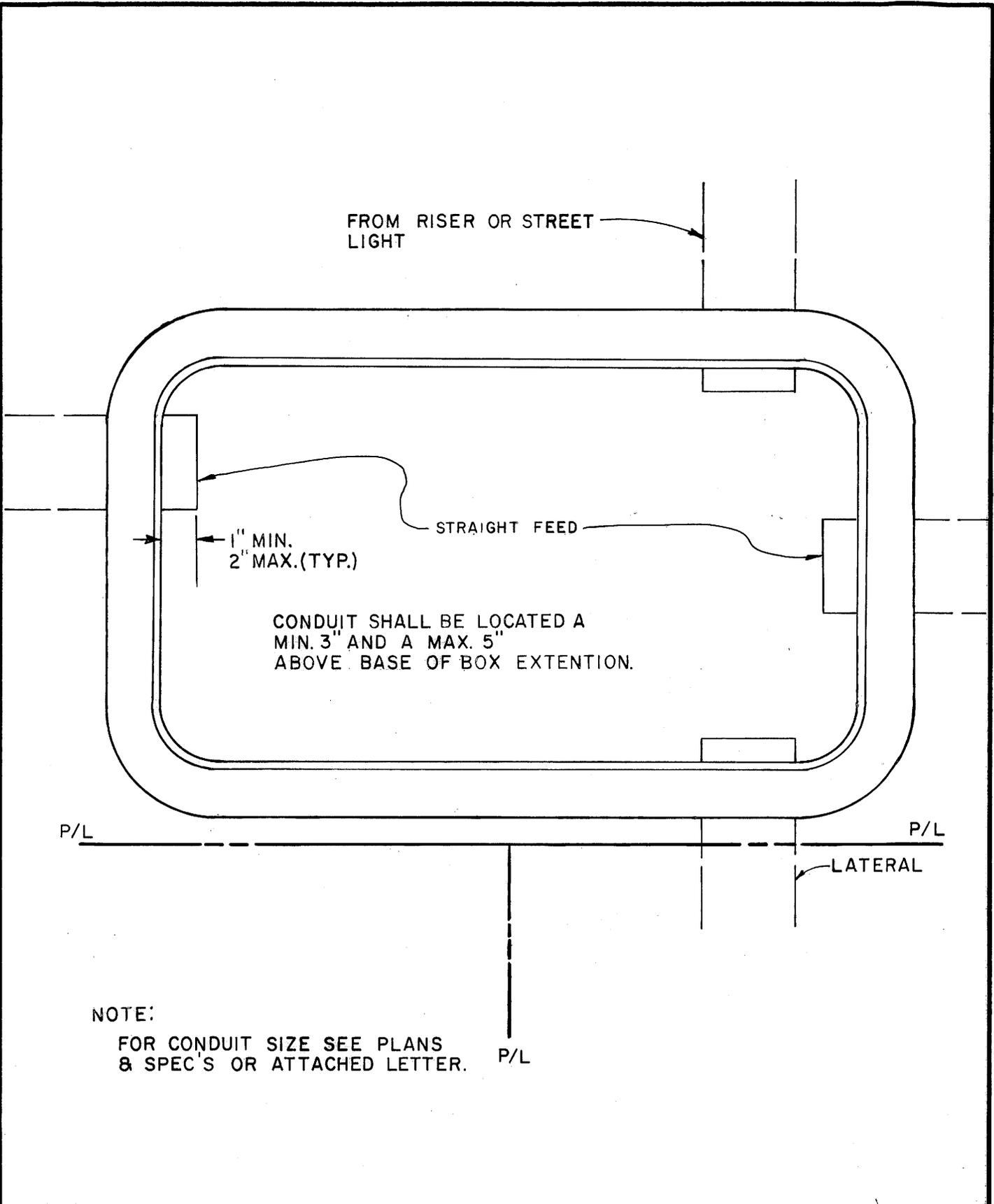
PUBLIC WORKS
 STANDARD NO E4

DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Rolfe 18036
 CITY ENGINEER RCE NO.

CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 CONDUIT PLACEMENT
 PRIMARY BOX

DWG. NO.

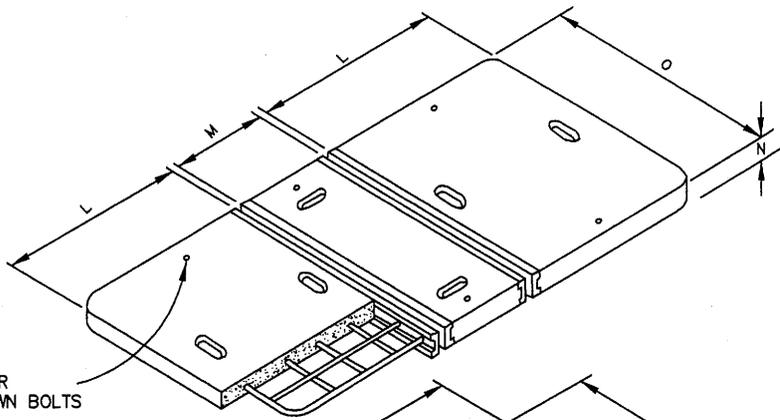
51



CONDUIT SHALL BE LOCATED A
MIN. 3" AND A MAX. 5"
ABOVE BASE OF BOX EXTENTION.

NOTE:
FOR CONDUIT SIZE SEE PLANS
& SPEC'S OR ATTACHED LETTER.

APPROVED BY CITY COUNCIL RESOLUTION NO 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO E5
DES: _____ DWN: _____ L.R.W. CHK: _____ DATE: _____ APPROVED: <i>Ray D. Rella</i> CITY ENGINEER	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS CONDUIT PLACEMENT SECONDARY BOX
DWG. NO. 52	RCE NO. 18036

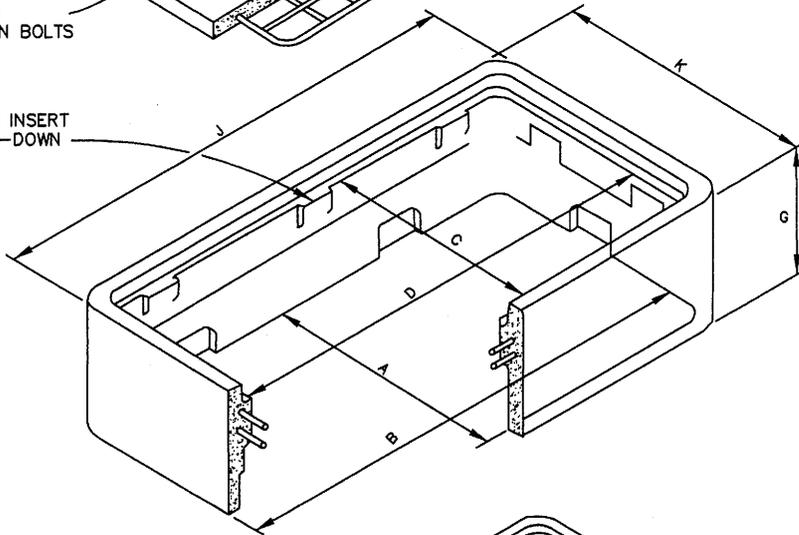


COVER

- BOX 2E-(1)PIECE-(1)"L"
- BOX 3E-(1)PIECE-(1)"L"
- BOX 4E-(2)PIECE-(2)"L"
- BOX 5E-(3)PIECE-(2)"L"(1)"M" (SHOWN)

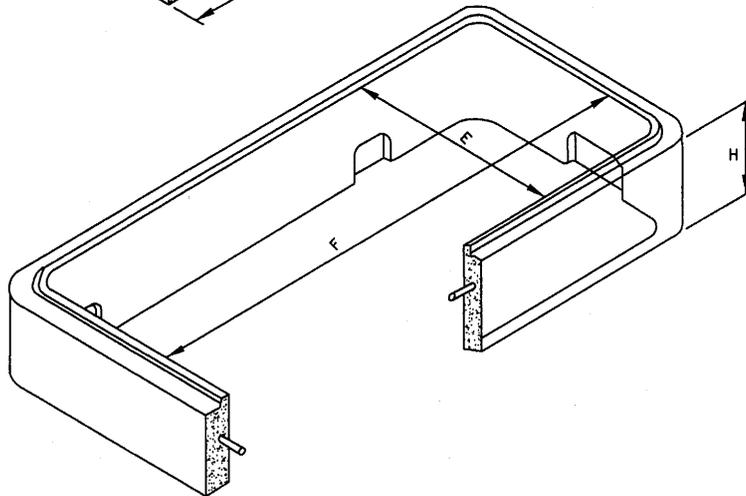
HOLES FOR
HOLD-DOWN BOLTS

THREADED INSERT
FOR HOLD-DOWN
BOLTS



BOX

(5E SHOWN)



EXTENSION

- BOX 2E-(1)REQ'D.
- BOX 3E-(1)REQ'D.
- BOX 4E-(1)REQ'D.
- BOX 5E-(1)REQ'D. (SHOWN)

NOTE: 5E BOX, COVER & EXTENSION ARE SHOWN 2E, 3E & 4E ARE SIMILAR

BOX NO.	DIMENSION													
	A	B	C	D	E	F	G	H	J	K	L	M	N	O
2E	17"	30"	17"	30"	—	—	12"	12"	34 3/4"	21 3/4"	30 1/2"	—	2"	17 1/2"
3E	24"	36"	21"	32 1/2"	24"	36"	14"	10"	40"	28 1/2"	35"	—	3"	24"
4E	30"	48"	27"	46"	28"	46"	14"	10"	52"	34"	24"	—	3"	30"
5E	30"	60"	27"	57"	29"	59"	14"	10"	52"	34"	24"	12"	3"	30"

NOTES:

1. ALL LIDS & COVERS SHALL BE FURNISHED WITH HOLD-DOWN BOLTS.
2. STEEL CHECKER PLATE TRAFFIC LIDS SHALL BE SUPPLIED WHERE SPECIFIED.
3. LIDS & COVERS SHALL BE IMPRINTED WITH "HIGH VOLTAGE".
4. BOXES TO BE BROOKS PRODUCTS, CHRISTY, BES, OR EQUIVALENT CONCRETE BOXES

APPROVED BY CITY COUNCIL
RESOLUTION NO. 2004-R-028
DATE: JULY 6, 2004

PUBLIC WORKS
STANDARD NO.

E6

DES: P.W.R. DRWN: P.W.R.
CHK: H.L.V. DATE: JUNE, 2004
APPROVED:

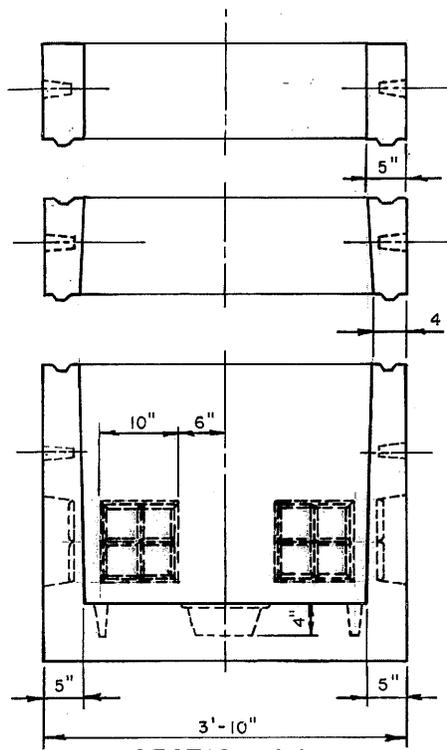
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

DWG. NO.

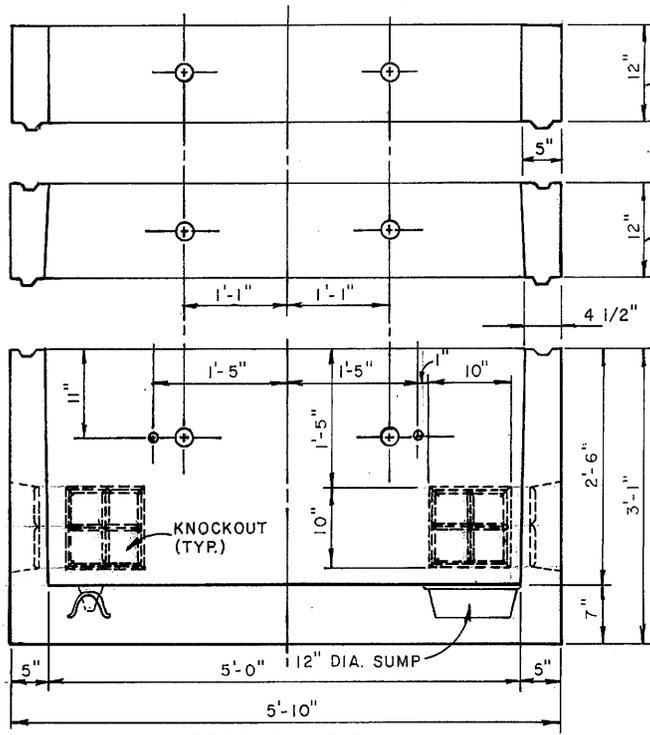
Erwin A. Nash 33381
CITY ENGINEER RCE NO.

ELECTRIC
PULL BOXES

53



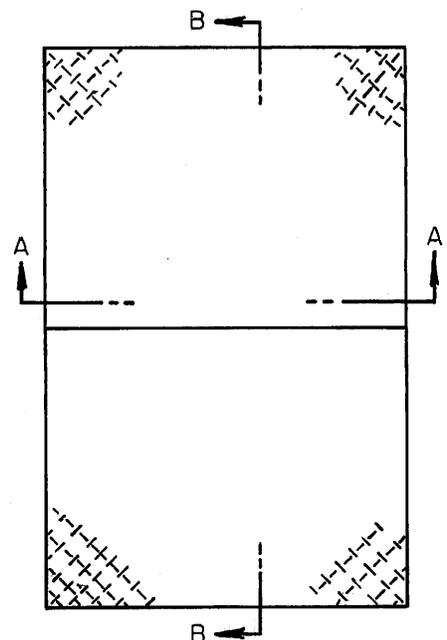
SECTION A-A



SECTION B-B

TOP SECTION CONSTRUCTION SIMILAR TO THE FOLLOWING: E.W. COOK-3x5 BOX UTILITY VAULT 35 P G & E.

NO. OF INTER-MEDIATE SECTIONS TO BE SPECIFIED BY CITY OF GRIDLEY ELECTRIC DEPT.



PLAN

GENERAL NOTES:

THIS VAULT IS FOR USE IN ALL NON PAVED AREAS SUBJECT TO PEDESTRIAN TRAFFIC WITH A RATING OF 300 LBS. PER SQ. FT. AND/OR LIGHT VEHICULAR TRAFFIC ONLY. DESIGN IS BASED ON A 5,000 LB. SINGLE WHEEL LOAD OVER ANY 10'x10" AREA. STRUCTURES MUST BE ABLE TO WITHSTAND FORCES DUE TO AN ADDITIONAL INWARD LOAD OF 20,000 LBS. (WORKING LOAD) WITH A SAFETY FACTOR OF 2, ACTING PERPENDICULAR TO THE SURFACE. STRUCTURES SHALL BE DESIGNED TO PROVIDE A DRY, WATERTIGHT INSTALLATION. BLIND GROUND HOLES SHALL BE PROVIDED IN EACH CORNER, 6" AWAY FROM ADJACENT SIDE WALLS

CONTRACTOR NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY LABOR, EQUIPMENT, TOOLS, AND MATERIALS TO COMPLETE THE VAULT INSTALLATION TO THE SPECIFIED LINES AND GRADES, INCLUDING SHEETING, SHORING, SAFETY EQUIPMENT, AND TRAFFIC CONTROL DEVICES. THE COMPLETE VAULT SHALL BE WATERTIGHT.

INSTALLATION:

EXCAVATION AND BEDDING: THE EXCAVATION MUST ALLOW FOR OVERALL ASSEMBLED HEIGHT OF VAULT PLUS THE HEIGHT OF RISERS, MANHOLE CASTINGS, ETC., AND 3" TO 6" OF COMPACTED SAND OR GRAVEL BEDDING MATERIAL, GRADED LEVEL. A MINIMUM CLEARANCE OF 6" AROUND THE SIDE WALLS OF THE VAULT IS REQUIRED FOR EASE OF INSTALLATION.

SETTING: THE VAULT IS ASSEMBLED BY LOWERING EACH SECTION INTO THE EXCAVATION. THE BASE SECTION IS LOWERED FIRST, SET LEVEL AND FIRMLY POSITIONED BEFORE PLACING INTERMEDIATE AND TOP SECTIONS. CARE SHALL BE TAKEN THAT THE SEAL SURFACES BETWEEN SECTIONS ARE CLEAN AND THAT THE GASKETS ARE IN PLACE.

BACKFILLING: BACKFILL AROUND ALL VAULTS SHOULD CONSIST OF GRAVEL OR SAND, SO THAT NO VOIDS REMAIN BETWEEN THE VAULT WALLS AND NATIVE SOIL. BACKFILLING SHOULD NOT BE DONE UNTIL THE VAULT IS COMPLETELY SOIL.

BACKFILLING SHOULD NOT BE DONE UNTIL THE VAULT IS COMPLETELY SOIL. BACKFILLING SHOULD NOT BE DONE UNTIL THE VAULT IS COMPLETELY SOIL. BACKFILLING SHOULD NOT BE DONE UNTIL THE VAULT IS COMPLETELY SOIL.

ASSEMBLED, MAKING CERTAIN TO COMPACT THE BACKFILL PROGRESSIVELY FROM THE BOTTOM TO THE SURFACE. ALL BACKFILLING IS THE RESPONSIBILITY OF THE CUSTOMER AND/OR CONTRACTOR.

ROUTING: ALL GROUTING OF RISERS, COVERS, CONDUIT, OR SPECIFIC SECTIONS OF VAULTS IS THE RESPONSIBILITY OF THE CUSTOMER AND/OR CONTRACTOR.

WHEN SETTING CONCRETE BOXES IN PLACE, USE SPACERS TO ADJUST THE BOX TO GRADE. GROUT BETWEEN BODY AND TOP SECTION AND AROUND DUCT ENTRANCES AS REQUIRED. IT IS DESIRABLE THAT ALL DUCTS ENTERING THE BOX DO SO THROUGH THE KNOCKOUTS. THE MAIN WALL OF THE VAULT SHOULD NOT BE BROKEN OUT TO PROVIDE ACCESS FOR DUCTS OR CONDUITS. DUCTS AND CONDUITS SHOULD NOT EXTEND MORE THAN TWO INCHES INTO THE BOX. WHERE PRECAST BOXES MUST BE LOCATED IN DRIVEWAYS OR OTHER AREAS SUBJECT TO LIGHT TRAFFIC, USE A TRAFFIC COVER AND RECESS BOX TO MAKE COVER FLUSH WITH SIDEWALK. USE BOLT DOWN COVERS ON ALL PRIMARY CABLE BOXES.

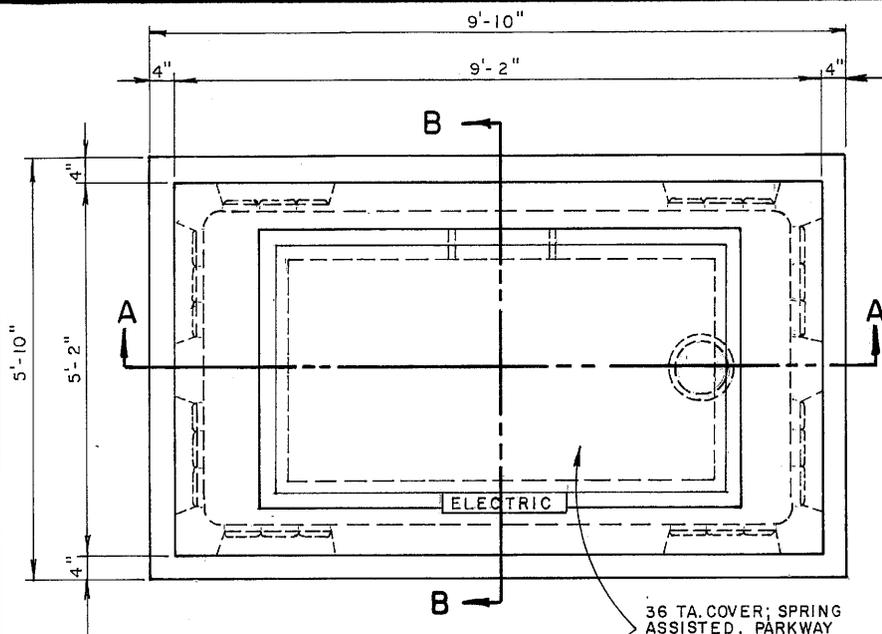
APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO E7

DES: _____ DWN: _____
CHK: _____ DATE: _____
APPROVED:
Ray D. Rolle 18036
CITY ENGINEER RCE NO.

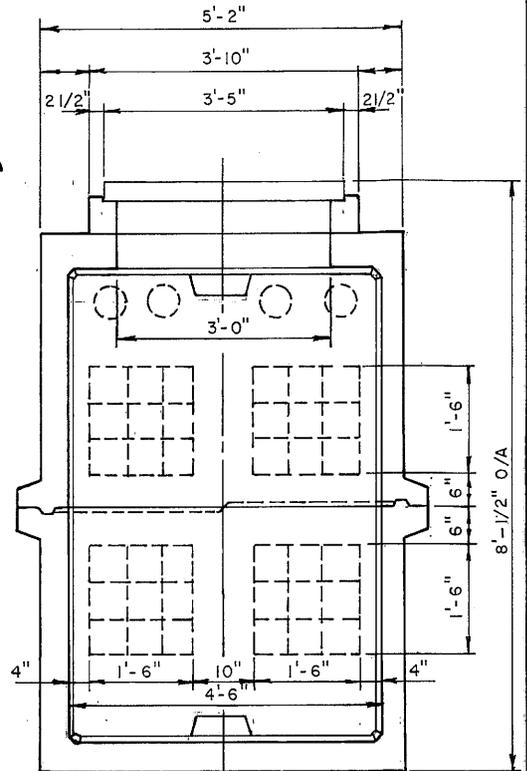
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
3' x 5' ELECTRICAL VAULT

DWG. NO.
54

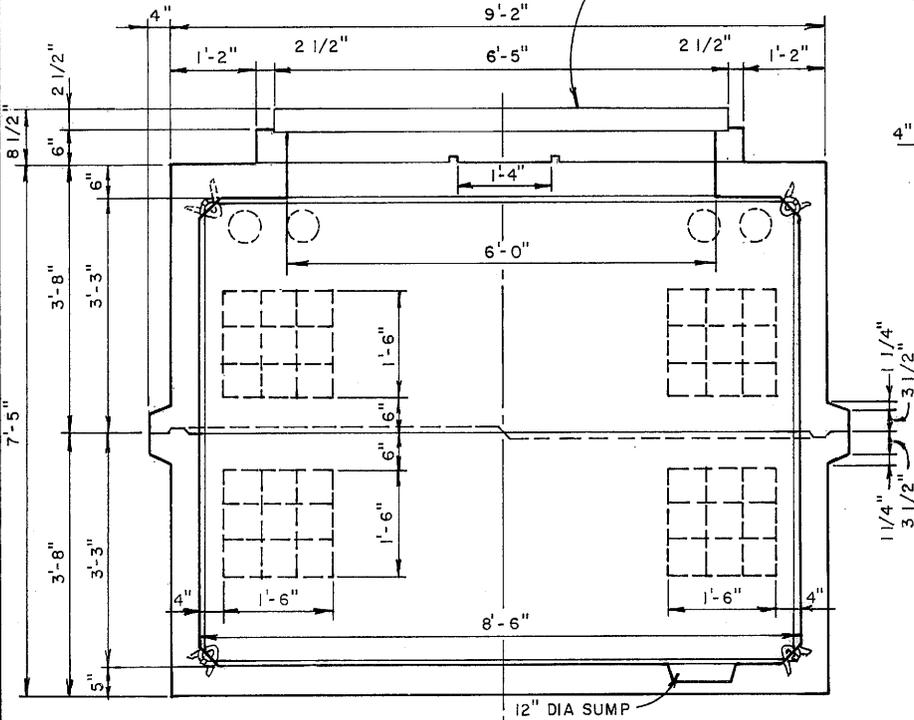


PLAN

36 TA. COVER; SPRING ASSISTED, PARKWAY LOADING, SAND EPOXY FINISH



SECTION B-B



SECTION A-A

NOTES:

EXCAVATION AND BEDDING: THE EXCAVATION MUST ALLOW FOR OVERALL ASSEMBLED HEIGHT OF VAULT PLUS ADDED HEIGHT OF RISERS, MANHOLE, CASTINGS, ETC., AND BEDDING MATERIAL CONSISTING OF THREE (3) INCHES TO SIX (6) INCHES OF COMPACTED SAND OR GRAVEL, GRADED LEVEL. A MINIMUM CLEARANCE OF SIX (6) INCHES AROUND THE SIDEWALLS OF THE VAULT IS REQUIRED FOR EASE OF INSTALLATION.

SETTING: THE VAULT IS ASSEMBLED BY LOWERING EACH SECTION INTO THE EXCAVATION. THE BASE SECTION IS LOWERED FIRST, SET LEVEL, AND FIRMLY POSITIONED BEFORE PLACING INTERMEDIATE AND TOP SECTIONS. CARE SHOULD BE TAKEN TO INSURE THAT THE SEAL SURFACES BETWEEN SECTIONS ARE CLEAN AND THAT THE GASKETS ARE IN PLACE.

BACKFILLING: BACKFILL MATERIAL AROUND VAULTS SHALL BE GRAVEL OR SAND SO THAT NO VOIDS REMAIN BETWEEN THE VAULT WALLS AND NATIVE SOIL. BACKFILLING SHALL NOT BE DONE UNTIL THE VAULT IS COMPLETELY ASSEMBLED, MAKING CERTAIN TO COMPACT THE BACKFILL PROGRESSIVELY FROM THE BOTTOM TO THE TOP SURFACE. ALL BACKFILLING IS THE RESPONSIBILITY OF THE CUSTOMER AND/OR CONTRACTOR.

GROUTING: GROUTING OF RISERS, COVERS, CONDUIT OR SPECIFIC SECTIONS OF VAULTS IS THE RESPONSIBILITY OF THE CUSTOMER AND/OR CONTRACTOR.

NOTES:

THE BOX SHALL BE POURED IN PLACE OR PRECAST WITH DIMENSIONS AS SHOWN WITH SIX (6) FOOT MINIMUM HEAD ROOM. AN ELECTRICAL VAULT INSTALLED AS A SPLICE BOX OR SWITCH ENCLOSURE SHALL HAVE HINGED COVERS MADE OF 1/4 INCH GALVANIZED STEEL DIAMOND PLATE AND THE COVER SHALL COME EQUIPPED WITH TORSION BAR OPENERS. A SUMP PUMP SHALL BE PROVIDED PER CITY STANDARDS FOR ALL VAULTS USED AS A SWITCH ENCLOSURE. IF THE VAULT LOCATION IS EXPOSED TO VEHICULAR TRAFFIC, THE COVER SHALL MEET OR EXCEED THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL'S STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, "H-20-44" LOADING.

APPROVED BY CITY COUNCIL
RESOLUTION NO 50
DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
STANDARD NO E8**

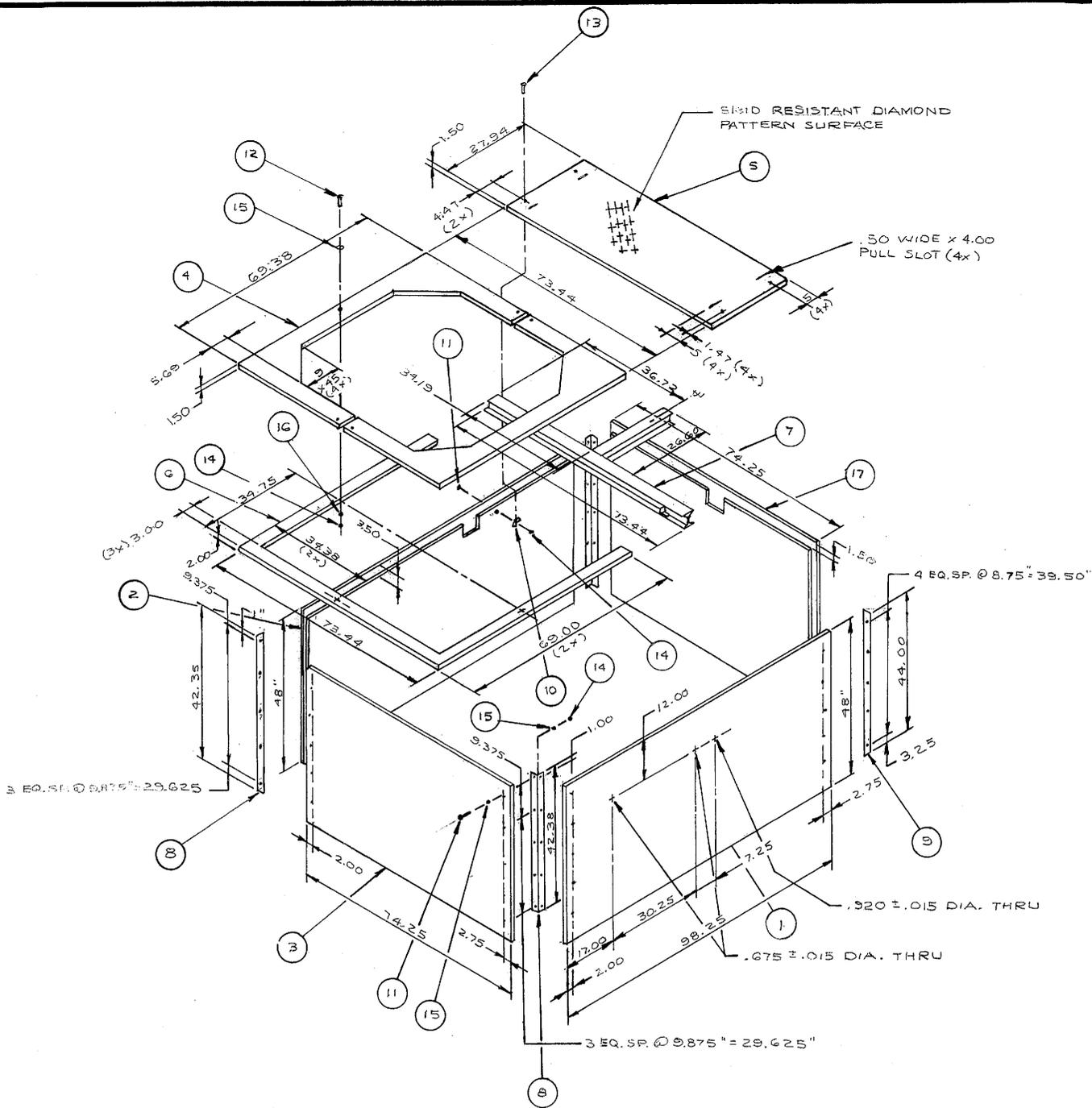
DES: _____ DWN: _____ L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rolfe 18036
CITY ENGINEER RCE NO.

**CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS**

4 1/2' x 8 1/2' ELECTRICAL VAULT

DWG. NO.

55



* NOTE: PART IS MADE OF COMPOSOLITE R.P.M.

2	U428	CORNER ANGLE 2"x2"x1/8", GALV. STL.	7	9						
2	U455	CORNER ANGLE 2"x2"x1/8", GALV. STL.	65	8	1	PM 1419 HR	END PANEL (MADE FROM MOLD GSK - 375)		17	
1	U 412	I-BEAM SUPPORT 4" H x 7.7" GALV. STL.	65	7	6	I2041	3/8" LOCKWASHER	GALV. STL.	16	
1	U 413	RECTANGULAR TUBE SUPPORT, GALV. STL.	94	6	86	I2039	3/8" FLATWASHER	GALV. STL.	15	
*	1	PM 1419 C	108	5	46	I2065	3/8"-16 HEX. NUTS	GALV. STL.	14	
*	1	PM 1419 F	152	4	4	U391	3/8"-16x2" LG. PENTA HD. BOLT, ST. STL.		13	
*	1	PM 1419 HL	145	3	6	I2042	3/8"-16x3 1/2" LG. HEX. HD. BOLT, GALV. STL.		12	
*	1	PM 1419 GL	177	2	40	I2013	3/8"-16x2 1/2" LG. HEX. HD. BOLT, GALV. STL.		11	
*	1	PM 1419 GR	177	1	4	U435	COVER LOCK DOWN BRACKET, GALV. STL.		.2 10	
QTY.	PART NO.	DESCRIPTION	WT	ITEM	QTY.	PART NO.	DESCRIPTION		WT	ITEM

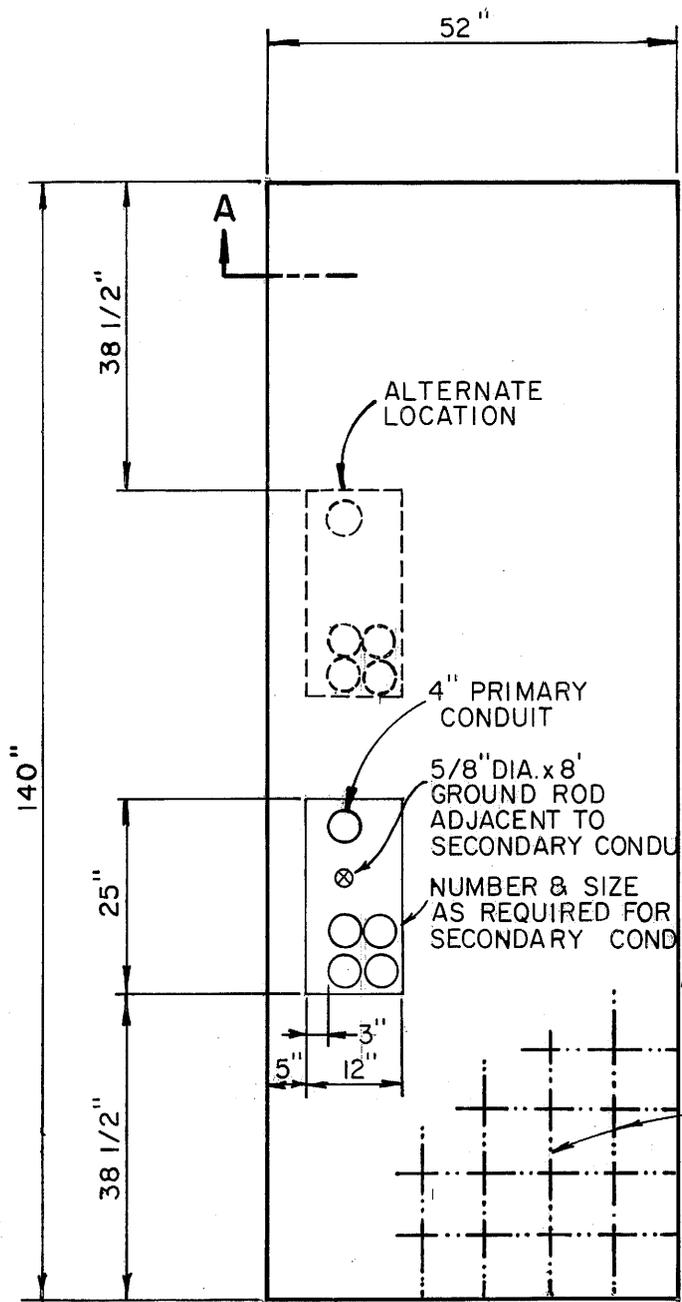
APPROVED BY CITY COUNCIL
 RESOLUTION NO.50
 DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
 STANDARD NO. E9

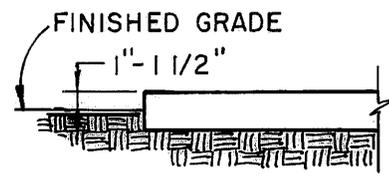
DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Roke 18036
 CITY ENGINEER RCE NO.

CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
 CARLON SWITCH VAULT
 6' x 8' x 4' DEEP

DWG. NO.
56



PLAN



SECTION A

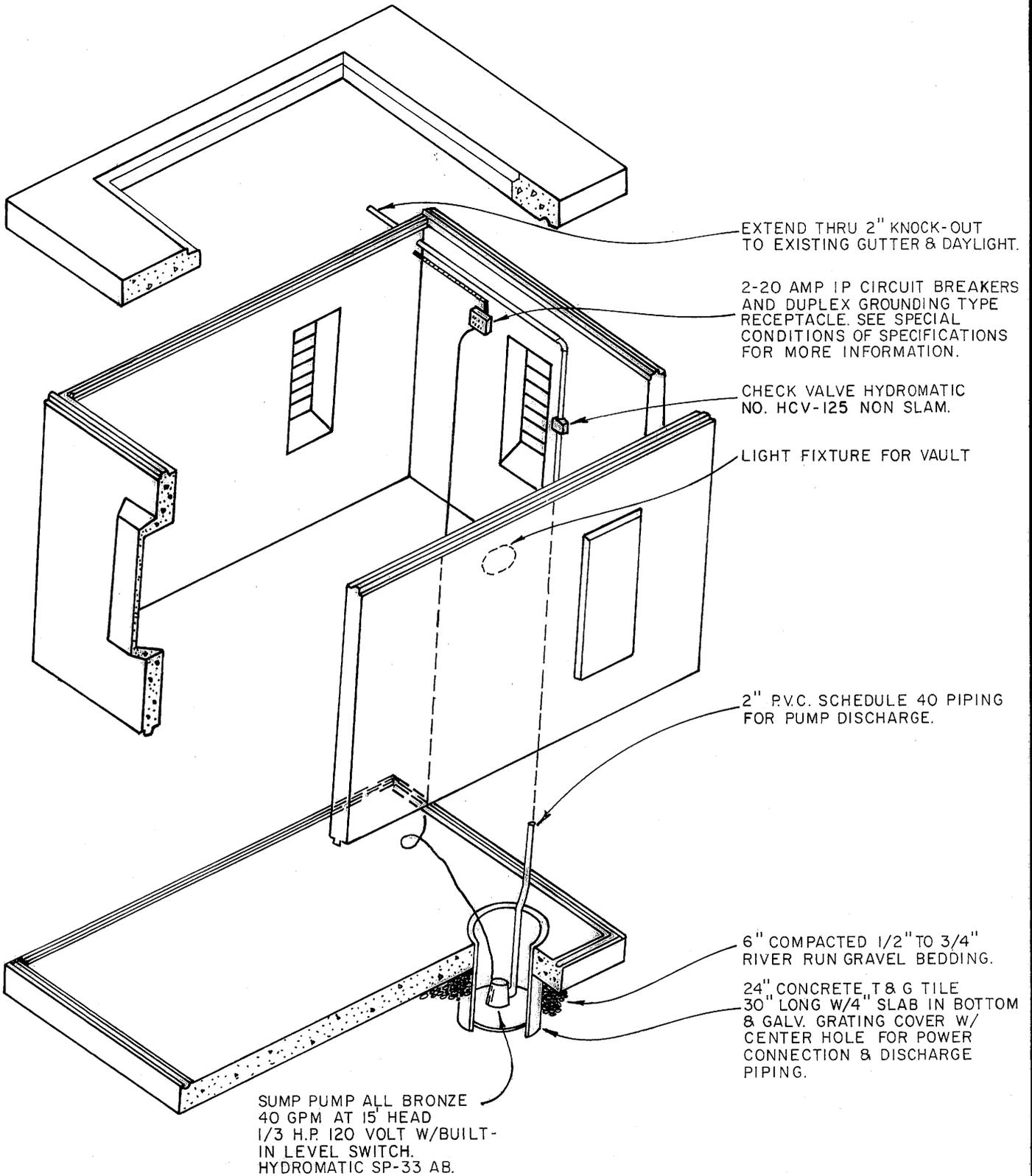
NOTES:

1. CONDUITS IN CORNERS WITH CITY OF GRIDLEY APPROVAL ONLY.
2. CITY OF GRIDLEY WILL FURNISH AND INSTALL ENCLOSURE BOLTS AS REQUIRED.
3. CONCRETE SHALL BE CLASS B P.C.C.
4. LAMPBLACK OF APPROVED QUALITY SHALL BE ADDED TO ALL CONCRETE AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

ALL EDGES TO BE ROUNDED

4" THICK CONCRETE SLAB WITH DOUBLE LOOPS OF NO. 4 BARS AT 8" O.C. BOTH WAYS

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO. E 10	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: <i>Ray D. Rowe</i> 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS FIBERGLASS ENCLOSURE TRANSFORMER PAD	DWG. NO. 57



APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

**PUBLIC WORKS
STANDARD NO. E-II**

DES: _____ DWN: L.R.W.

CHK: _____ DATE: _____

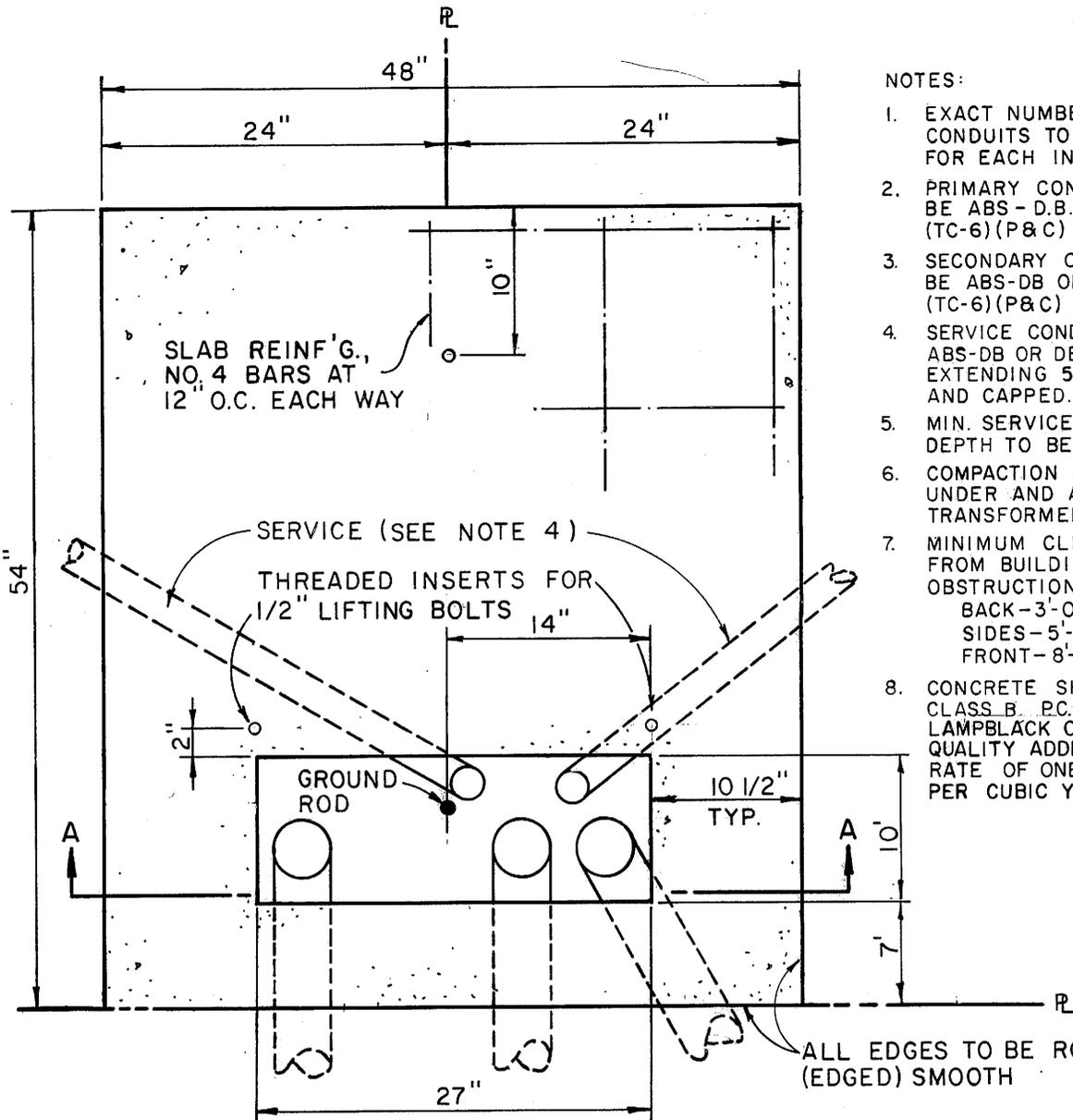
APPROVED:
Ray D. Rolfe 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS

SUMP PUMP DETAILS

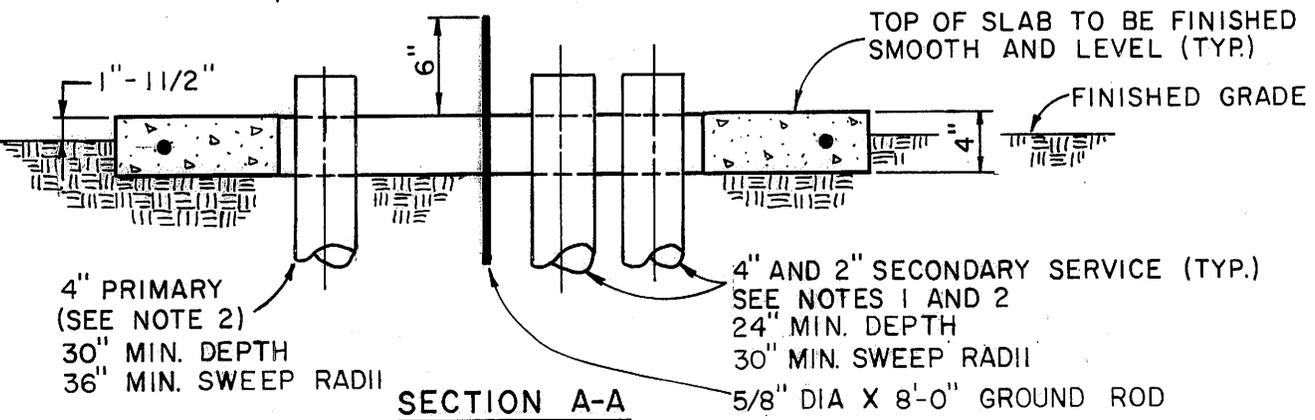
DWG. NO.

58



NOTES:

1. EXACT NUMBER OF CONDUITS TO BE SPECIFIED FOR EACH INSTALLATION.
2. PRIMARY CONDUITS SHALL BE ABS-D.B. OR DB-PVC (TC-6)(P&C)
3. SECONDARY CONDUIT SHALL BE ABS-DB OR DB-PVC (TC-6)(P&C)
4. SERVICE CONDUIT SHALL BE ABS-DB OR DB-PVC (TC-6)(P&C) EXTENDING 5' BEYOND PAD AND CAPPED.
5. MIN. SERVICE CONDUIT DEPTH TO BE 24".
6. COMPACTION REQUIRED UNDER AND AROUND TRANSFORMER PAD.
7. MINIMUM CLEARANCE FROM BUILDINGS OR OBSTRUCTIONS TO BE:
 BACK-3'-0"
 SIDES-5'-0"
 FRONT-8'-0"
8. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.



APPROVED BY CITY COUNCIL
 RESOLUTION NO. 50
 DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
 STANDARD NO. E 12

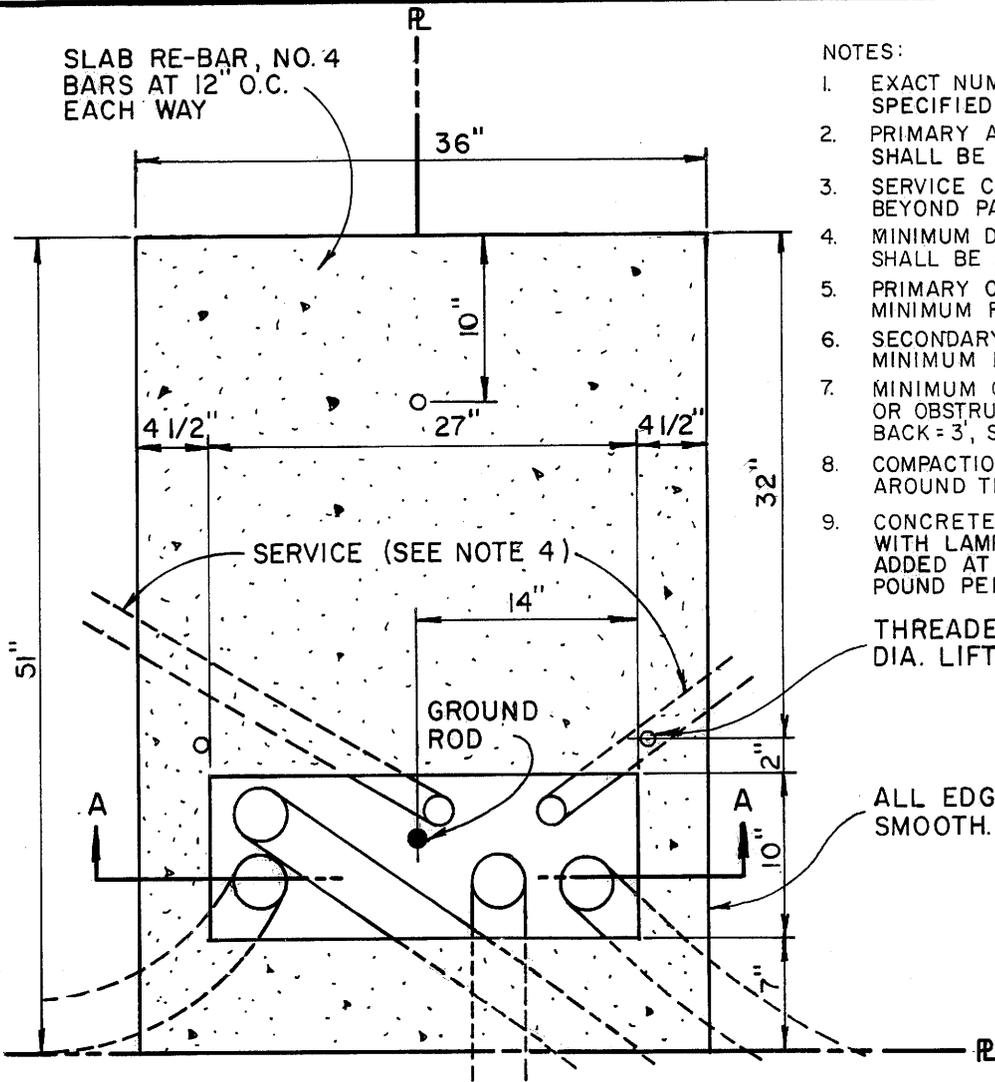
DES: _____ DWN: L.R.W.
 CHK: _____ DATE: _____
 APPROVED:
Ray D. Peltz 18036
 CITY ENGINEER RCE NO.

CITY OF GRIDLEY
 DEPARTMENT OF PUBLIC WORKS
SINGLE PHASE
TRANSFORMER PAD DETAILS
 25 K.V.A. TO 167 K.V.A.

DWG. NO.

59

SLAB RE-BAR, NO. 4
BARS AT 12" O.C.
EACH WAY



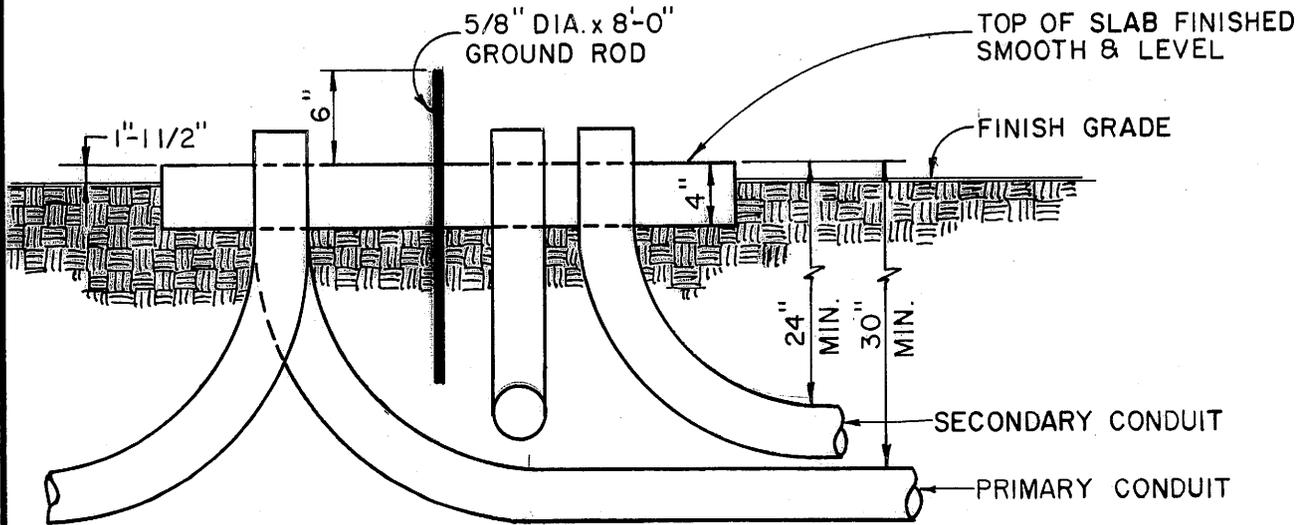
NOTES:

1. EXACT NUMBER OF CONDUITS TO BE SPECIFIED FOR EACH INSTALLATION.
2. PRIMARY AND SECONDARY CONDUITS SHALL BE PVC (TC-6 W.U.C.-3.1) OR EQUAL.
3. SERVICE CONDUIT SHALL EXTEND 5' BEYOND PAD AND CAPPED.
4. MINIMUM DEPTH OF SERVICE CONDUIT SHALL BE 24".
5. PRIMARY CONDUIT SHALL HAVE 36" MINIMUM RADIUS SWEEPS.
6. SECONDARY CONDUIT SHALL HAVE 30" MINIMUM RADIUS SWEEPS.
7. MINIMUM CLEARANCE FROM BUILDINGS OR OBSTRUCTIONS TO BE: BACK=3', SIDES=5' AND FRONT=8'
8. COMPACTION REQUIRED UNDER AND AROUND TRANSFORM PAD.
9. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

THREADED INSERTS FOR 1/2" DIA. LIFTING BOLTS (TYP. OF 3)

ALL EDGES SHALL BE ROUNDED SMOOTH.

PLAN



SECTION A-A

APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO. E 13

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Rolle 18036
CITY ENGINEER RCE NO.

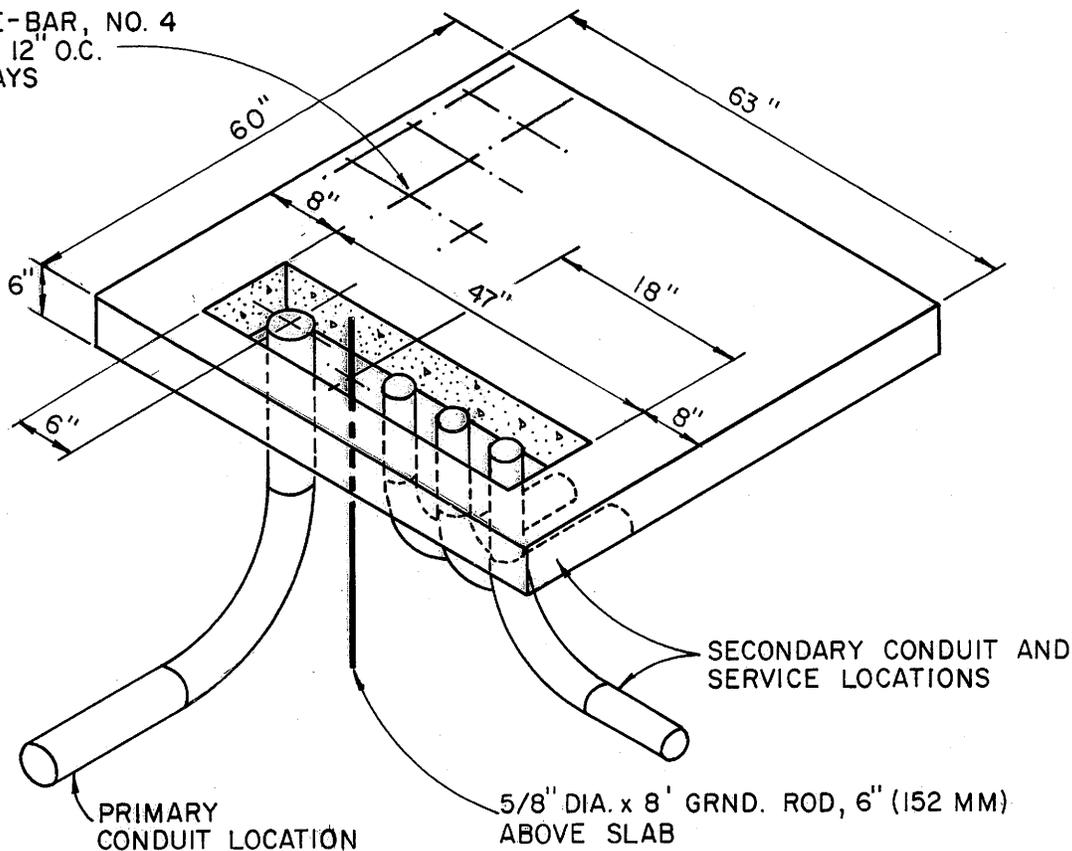
CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
1" DIA FEED THRU TRANSFORMER
CONDUIT ARRANGEMENT
25 KVA TO 167 KVA

DWG. NO.
60

NOTES:

1. PRIOR TO POURING PAD HAVE ELECTRIC DEPARTMENT INSPECT CONDUIT LOCATION.
2. SECONDARY CONDUITS SHALL BE INSTALLED ON EXTREME RIGHT SIDE OF PAD OPENING.
3. MIN. CLEARANCE FROM BUILDINGS OR OTHER OBSTRUCTIONS TO BE:
BACK= 3', SIDES= 5', FRONT= 8'.
4. COMPACTION REQUIRED UNDER AND AROUND PAD.
5. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
6. MINIMUM DEPTHS:
PRIMARY CONDUIT = 30"
SECONDARY CONDUIT = 24"
7. MINIMUM SWEEP RADII:
PRIMARY CONDUIT = 36"
SECONDARY CONDUIT = 30"
8. CONDUIT SHALL BE PVC TC-6 (P&C)

SLAB RE-BAR, NO. 4
BARS AT 12" O.C.
BOTH WAYS



APPROVED BY CITY COUNCIL
RESOLUTION NO. 50
DATE: SEPTEMBER 16, 1991

PUBLIC WORKS
STANDARD NO. E 14

DES: _____ DWN: L.R.W.
CHK: _____ DATE: _____
APPROVED:
Ray D. Pelle 18036
CITY ENGINEER RCE NO.

CITY OF GRIDLEY
DEPARTMENT OF PUBLIC WORKS
TRANSFORMER PAD
45 KVA TO 500 KVA
(3 PHASE)

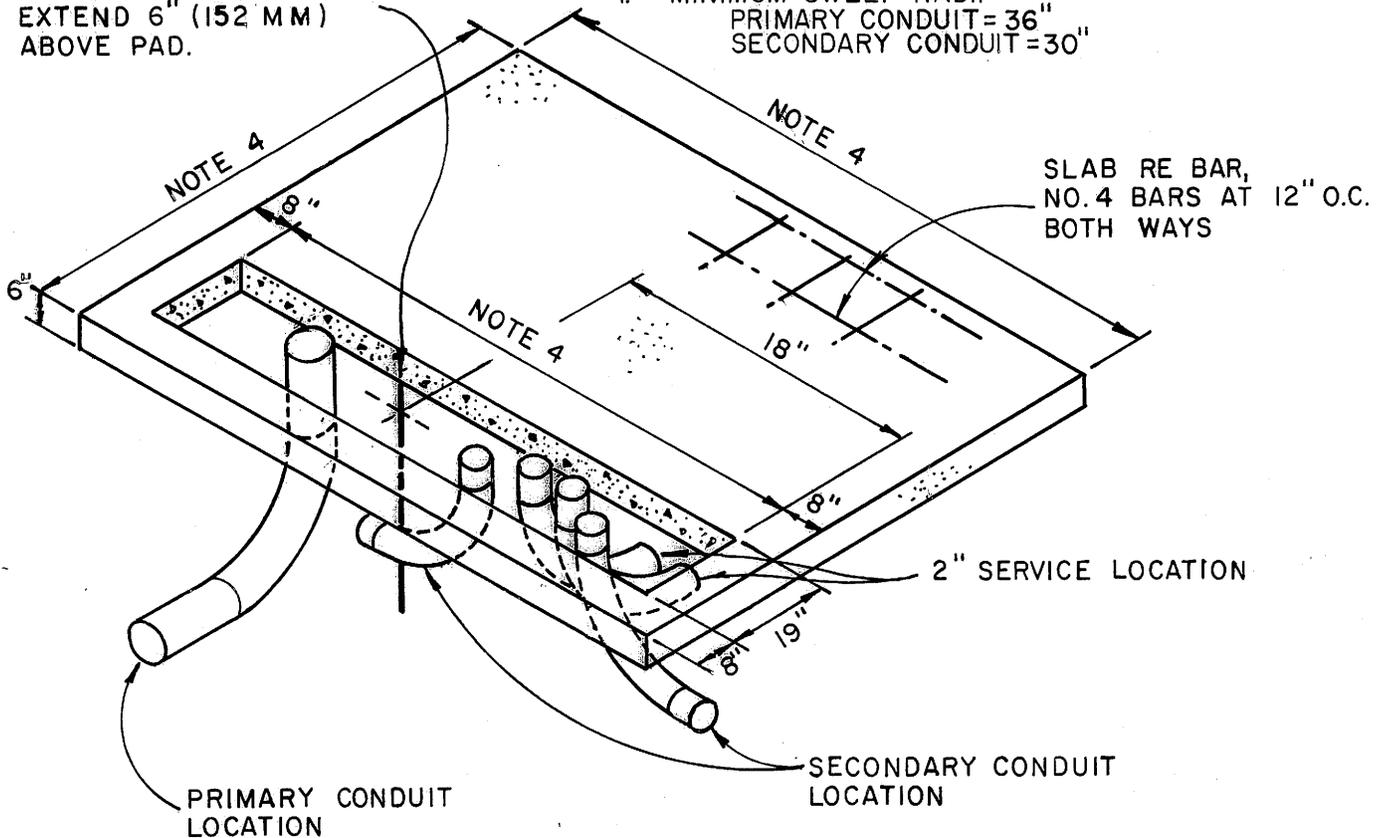
DWG. NO.

61

NOTES:

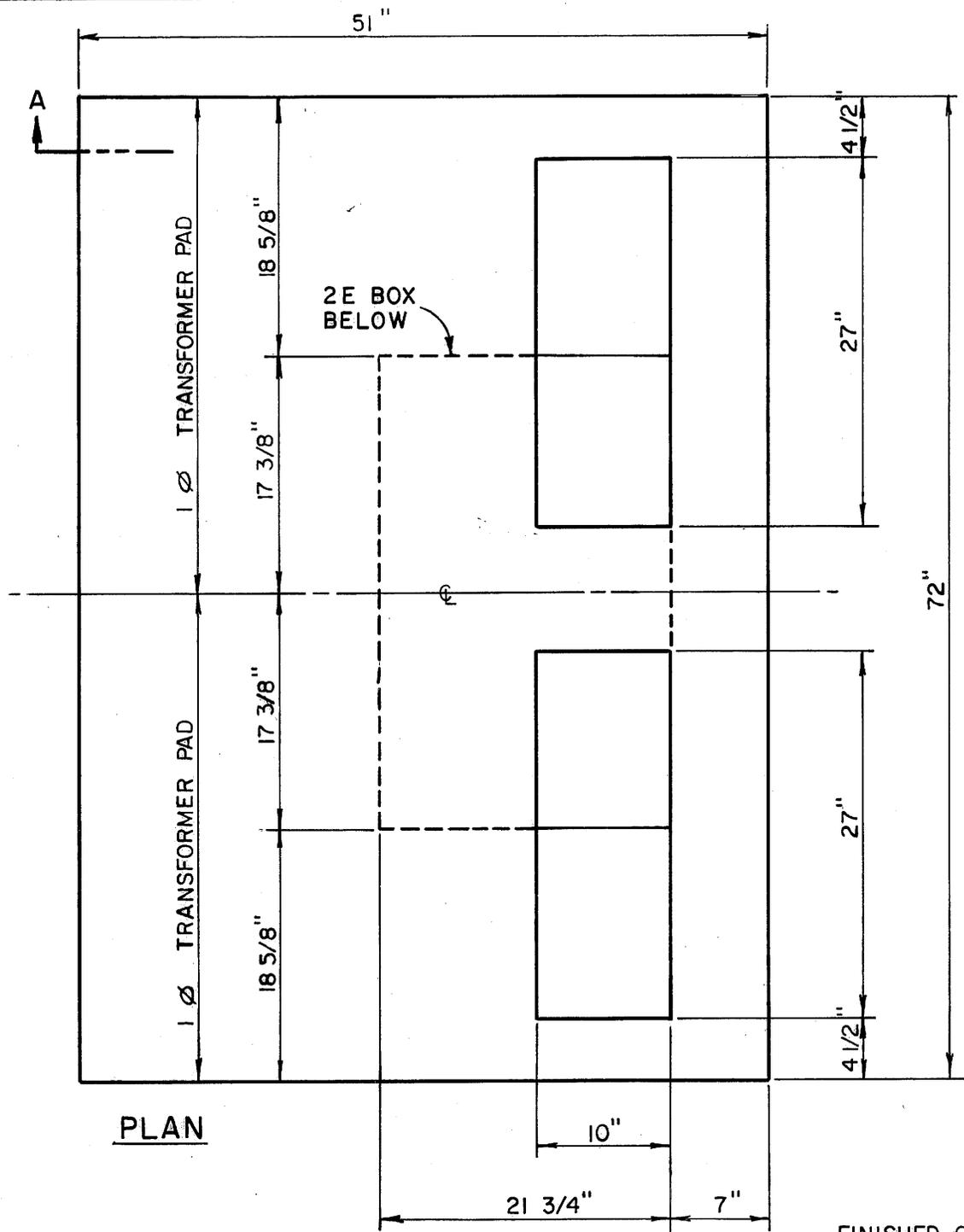
1. PRIOR TO POURING PAD HAVE ELECTRIC DEPARTMENT INSPECT CONDUIT LOCATION.
2. MIN. CLEARANCE FROM BUILDINGS OR OTHER OBSTRUCTIONS TO BE: BACK=3', SIDES=5', FRONT=8'.
3. COMPACTION UNDER AND AROUND PAD.
4. CONTACT ELECTRIC DEPARTMENT FOR DIMENSION.
5. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK OF APPROVED QUALITY ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.
6. MINIMUM DEPTH:
 PRIMARY CONDUIT = 30"
 SECONDARY CONDUIT = 24"
7. MINIMUM SWEEP RADII:
 PRIMARY CONDUIT = 36"
 SECONDARY CONDUIT = 30"

5/8" DIA. x 8' GRND. ROD -
 EXTEND 6" (152 MM)
 ABOVE PAD.

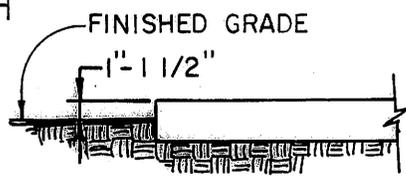


NOTE: CONDUIT SHALL BE PVC TC-6 (P&C)

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO. E-15	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: <i>Ray D. Rolfe</i> 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS TRANSFORMER PAD 750 KVA TO 2500 KVA (3 PHASE)	DWG. NO. 62



PLAN



SECTION A

NOTES:

1. PADS INSTALLED OVER 2E BOX.
2. CONDUIT ROUTING PER FIELD CONDITIONS.
3. CONCRETE SHALL BE CLASS B P.C.C. WITH LAMPBLACK ADDED AT THE RATE OF ONE-HALF POUND PER CUBIC YARD.

APPROVED BY CITY COUNCIL RESOLUTION NO. 50 DATE: SEPTEMBER 16, 1991	PUBLIC WORKS STANDARD NO. E-16	
DES: _____ DWN: L.R.W. CHK: _____ DATE: _____ APPROVED: <i>Ray D. Rell</i> 18036 CITY ENGINEER RCE NO.	CITY OF GRIDLEY DEPARTMENT OF PUBLIC WORKS PAD MOUNT TRANSFORMER OPEN DELTA	DWG. NO. <div style="font-size: 2em; font-weight: bold; text-align: center;">63</div>