PROCEDIMIENTO CONSTRUCTIVO

NOMBRE DE LA OBRA

MODERNIZACIÓN CON PAVIMENTO DE CONCRETO HIDRÁULICO UBICADA EN BOULEVARD VALSEQUILLO, ENTRE AVENIDA 11 SUR Y PERIFÉRICO ECOLÓGICO, DEL MUNICIPIO DE PUEBLA.

UBICACIÓN:

BOULEVARD VALSEQUILLO ENTRE AVENIDA 11 SUR Y PERIFERICO ECOLOGICO, EN LAS COLONIAS GABRIEL PASTOR, LAS PALMAS, SAN BALTAZAR, BUGAMBILIAS, UNIVERSIDADES, XILOTZINGO, VILLA ALEGRE Y ARBOLEDAS DE SAN IGNACIO.

1.- DEFINICIÓN.

Pavimentación de concreto hidráulico; el conjunto de actividades que se realizan en una zona para crear vías urbanas que den servicio a la población al darle la función de circulación y la función de acceso local con mayor durabilidad.

2.- OBJETIVO.

Satisfacer la demanda de la comunidad respecto a mejoramiento de las vialidades y de la imagen urbana y al mismo tiempo mejorar la calidad de vida de los poblanos.

.3.- UTILIZACIÓN.

Este es el procedimiento más común para dotar de infraestructura a colonias, regularmente a través del diseño de una obra de pavimento de concreto hidráulico.

4.- MATERIALES.

Cemento portland, Grava, Piedra braza, Arena, Agua, Cal hidratada, Diesel, Material producto de banco (tepetate), Acero de refuerzo No. 4, Brocal y tapa de policoncreto, Tubería de polietileno de Alta Densidad, Tubería de PV.C., Abrazadera de P.V.C. 2 ½.

5.- equipo

Camión de volteo capacidad 7 m3, Rodillo compactador marca, Retro excavadora marca, Motoconformadora marca, Camión pipa de 8000 lts. sobre chasis, Moto sierra con espada de 91 cm (36"), Petrolizadora de 10000 lts. MOD 2550 155 HP. Regla vibratoria, Cortadora de disco, Pipa de agua, Planta de Premezclado de Concreto, Camión Revolvedor de 7m3, Regla Vibratoria, Vibrador de Inmersión.

6.- transporte y ALMACENAMIENTO

El transporte de todos los materiales de banco y mezclados, son responsabilidad exclusiva del Contratista de Obra y los realizará de forma tal que no sufran alteraciones que ocasionen deficiencias en la calidad de la obra, tomando en cuenta lo establecido en las Normas de la S.C.T. Se sujetarán, en lo que corresponda, a las leyes y reglamentos de protección ecológica vigentes.

7.- CARACTERISTICAS GENERALES

sección de la carpeta HIDRAULICA

Construcción de carpeta de concreto hidráulico mr 48kg/cm2, de 20cm de espesor, para modernización de vialidad texturizado rayado en sentido transversal, modulación de losas de hasta 3.0m en corte transversal y de 3.0m a 3.50m en juntas longitudinales

8.- CARACTERISTICAS particulares

El proceso constructivo contempla los siguientes conceptos:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **No.** | **Clave** | **Concepto de trabajo** | **Unidad de Medida** | | **Cantidad ó Volumen** | | | **Precios Costos Directo $** | | | **Importe  $** | | **TODOS LOS CONCEPTOS PRECIO POR UNIDAD DE OBRA TERMINADA (P.U.O.T)** | | | | | | | | | | | | | **I. PRELIMINARES** | | | | | | | | | | | | | **1** | **AP020011** | TRAZO Y NIVELACION DE VIALIDAD CON EQUIPO TOPOGRAFICO DE PRECISION, EL PRECIO INCLUYE: MANO DE OBRA ESPECIALIZADA, EQUIPO, MATERIALES Y TODO LO NECESARIO PARA SU CORRECTA EJECUCION (EL PRECIO SE PAGA UNA SOLA VEZ PARA TODA LA OBRA). | M2 | | 174,711.33 | $4.13 | | | $ 721,557.79 | | | | **2** | **AP020065** | LETRERO NOMINATIVO DE OBRA, FABRICADO A BASE DE PERFILES ESTRUCTURALES Y TABLEROS A BASE DE VINIL CON LEYENDA SEGÚN LO INDIQUE LA DEPENDENCIA, DE 9.00 X5.00 M. | PZA | | 4.00 | $29,736.89 | | | $ 118,947.56 | | | | **TERRACERÍAS Y PAVIMENTOS** | | | | | | | | | | | | | **3** | **AP200063** | CORTE CON CORTADORA DE DISCO EN PAVIMENTO ASFALTICO ( 10 CM. DE PROFUNDIDAD ) | M | | 1,260.00 | | $19.39 | | $ 34,203.96 | | | | **4** | **AP020069** | DEMOLICION A MANO DE PAVIMENTO DE PIEDRA BOLA (EMPEDRADO ) HASTA 15 CM. DE ESPESOR. | M2 | | 29.68 | | $30.27 | | $ 1,257.78 | | | | **5** | **AP200013** | EXCAVACION EN CAJA POR MEDIOS MECANICOS EN TERRENO TIPO I Y II CUALQUIER ZONA (CON MOTONIVELADORA) | M3 | | 247.50 | | $9.52 | | $ 3,298.68 | | | | **6** | **AP200175** | FRESADO DE 4 CM DE LA CARPETA ASFALTICA EXISTENTE, CON EQUIPO MECANICO, INC. CARGA Y ACARREO FUERA DE LA OBRA, PUOT | M3 | | 34,942.27 | | $149.37 | | $ 7,307,057.62 | | | | **7** | **AP020070** | ESCARIFICADO Y COMPACTACION DE TERRENO NATURAL AL 95 % PROCTOR PARA CONSTRUCCION DE TERRACERIAS CON ESPESOR DE 30 CM INCLUYE TNCE | M2 | | 174,711.33 | | $41.05 | | $ 3,012,198.10 | | | | **8** | **AP200003** | ACARREO EN CAMION DE MATERIAL MIXTO. PRIMER KILOMETRO, CARGA MECANICA | M3 | | 35,219.45 | | $19.08 | | $ 940,781.95 | | | | **9** | **AP200004** | ACARREO EN CAMION DE MATERIAL MIXTO. KILOMETRO SUBSECUENTE, ZONA URBANA | M3/KM | | 633,950.10 | | $3.70 | | $ 3,283,861.52 | | | | **10** | **AP200092** | BARRIDO A MANO DE LA SUPERFICIE A TRATAR. | M2 | | 174,711.33 | | $0.23 | | $ 56,257.05 | | | | **11** | **AP020134** | RIEGO DE IMPREGNACION CON EMULSION ASFALTICA DE TIPO ECI-60 , INCLUYE: SUMINISTRO DE MATERIALES, MANO DE OBRA,MAQUINARIA, ACARREOS, HERRAMIENTA Y T.N.C.E. | LT | | 262,067.00 | | $8.87 | | $ 3,254,348.01 | | | | **12** | **AP020071** | CONSTRUCCIÓN DE PAVIMENTO DE CONCRETO HIDRAULICO MR=48 KG/CM2 A 28 DIAS, TMA 40 MM, REV. 10 CM, CON AGENTE DE CURADO INTERNO HIDRATIUM O SIMILAR DE 18 CM DE ESPESOR, TEXTURIZADO RAYADO. EL PRECIO INCLUYE: a) CIMBRADO, REGLEADO, VIBRADO, MICROTEXTURIZADO LONGITUDINAL CON TELA DE YUTE, MACROTEXTURIZADO TRANSVERSAL CON PEINE METALICO Y CORADO CON MEMBRANA DE CURADO QUE CUMPLA CON LA NORMA ASTM C 309. b) SUMINISTRO Y COLOCACION DE BARRAS DE AMARRE EN JUNTA LONGITUDINAL DE VARILLA CORRUGADA DE 1/2" F DE 70 CM DE LONGITUD @ 75 CM. c) SUMINISTRO Y COLOCACION DE BARRA PASAJUNTAS DE 3/4" F DE 40 CM DE LONGITUD @ 30 CM SOLO EN JUNTAS DE CONSTRUCCION O INTERRUPCIONES DEL COLADO d) CORTE DE JUNTAS DE HASTA 1/3 DEL ESPESOR EN TABLEROS DE MAXIMO 3.0 M DE SEPARACION EN CORTES TRANSVERSALES Y DE 2.70 M A 4.0 M EN JUNTAS LONGITUDINALES e ) SUMINISTRO Y COLOCACION DE SELLO EN JUNTAS DE CONTROL Y CONSTRUCCION CON SELLADOR ELASTOMERICO DE UN COMPONENTE, INCLUYENDO BAKER ROD. EL CONCRETO HIDRAULICO SE ELABORARÁ EN PLANTAS DOSIFICADORAS QUE TENGAN CERTIFICADO SU PROCESO DE PRODUCCION BAJO LA NORMA ISO-9001-2008. | M2 | | 174,711.33 | | $413.64 | | $ 101,174,632.36 | | | | **DIVERSOS** | | | | | | | | | | | | | **13** | **AP030005-1** | RENIVELACION DE POZO DE VISITA HASTA 40 CMS. INCLUYE SUMINISTRO Y COLOCACION DE BROCAL Y TAPA DE POLICONCRETO MATERIAL MANO DE OBRA HERRAMIENTA Y TODO LO NECESARIO PARA SU CORRECTA EJECUCION | PZA | | 346.00 | | $2,352.95 | | | $ 1,058,414.00 | | | **14** | **AP030005** | RENIVELACION DE CAJAS DE VALVULAS DE 1.50 X 1.50 HASTA 0.40 MTS. DE ALTURA CON TABIQUE ROJO RECOCIDO Y MORTERO CEMENTO-ARENA 1:5 INCLUYE: MATERIAL, MANO DE OBRA, HERRAMIENTA Y TODO LO NECESARIO PARA SU CORRECTA EJECUCION | PZA | | 196.00 | | $ 1,840.93 | | | $ 360,822.28 | | | **15** | **AP200070** | RENIVELACION DE CAJA CON REJILLA DE 60 X 60 HASTA 20 CM. ASENTADO CON MORTERO CEMENTO-ARENA 1:4 INCLUYE: DESMANTELAMIENTO Y RECOLOCACION DE TAPA O REJILLA | PZA | | 600.00 | | $341.10 | | | $ 286,524.00 | | | **16** | **AP200074** | SUMINISTRO Y COLOCACIÓN DE REJILLA ELECTRO SOLDADA TIPO IRVING TRAFICO PESADO TIPO IS-01 ESTÁNDAR ( 1.00 x 0.75) INCLUYE SOLERA DE REMATE DE 3/16" x 2" | PZA | | 600.00 | | $2,185.15 | | | $ 1,835,526.00 | | | **17** | **AP200149** | DESASOLVE Y LIMPIEZA DE BROCALES Y REJILLAS, INCLUYE: RETIRO DE MATERIAL, MATERIALES, MANO DE OBRA, HERRAMIENTA Y TODO LO NECESARIO PARA SU CORRECTA EJECUCION | PZA | | 2,284.00 | | $88.16 | | | $ 281,900.42 | | | **18** | **AP030001** | REPARACIÓN DE TOMAS DOMICILIARIAS A BASE DE TUBERIA NEGRA DE POLIETILENO DE 3/4" CON UN DESARROLLO DE 6 MTS., INCLUYE:ABRAZADERAS P/TOMA, EXCAVACIÓN, DESALOJO, RELLENO COMPACTADO, CON MATERIAL DE TERRACERÍA, INC: TODO EL MATERIAL DE REPARACIÓN, MANO DE OBRA Y HERRAMIENTA. | PZA | | 319.00 | | $720.70 | | | $ 321,864.62 | | | **19** | **AP030002** | REPARACIÓN DE DESCARGA DOMICILIARIA CON TUBO PVC SANITARIO DE 6" CON UN DESARROLLO DE 4 MTS. INCLUYE: EXCAVACIÓN DESALOJO DE AGUA, RELLENO COMPACTADO, CON MATERIAL DE TERRACERÍA, INCL: TODO EL MATERIAL DE REPARACIÓN, MANO DE OBRA Y HERRAMIENTA. | PZA | | 319.00 | | $415.29 | | | $ 185,468.51 | | | **20** | **AP200145** | REPARACIÓN DE TUBERÍA DE AGUA POTABLE DE PVC Y ASBESTO CEMENTO DE 4" A 8" DE DIÁMETRO, INCLUYE: TRAZO, EXCAVACIÓN, SUMINISTRO Y COLOCACIÓN DE MATERIALES PARA REPARACIÓN, RELLENO Y COMPACTACIÓN, ACARREOS NECESARIOS, DESPERDICIOS Y TODO LO NECESARIO PARA SU CORRECTA EJECUCIÓN | PZA | | 6,200.00 | | $820.76 | | | $ 7,124,196.80 | | | **21** | **AP030007** | REPARACIÓN DE TUBERÍA 45 CM DIAMETRO DE DRENAJE RESIDUAL AFECTADA POR LA CONSTRUCCIÓN, EXCAVACIÓN, DESALOJO DE AGUA, SUSTITUCIÓN DE TUBERÍA, RELLENO COMPACTADO CON MATERIAL DE TERRACERIAS, INCLUYE: TODO EL MATERIAL DE REPARACIÓN, MANO DE OBRA Y HERRAMIENT | PZA | | 1,016.39 | | $819.11 | | | $ 7,109,874.80 | | | **22** | **AP200140** | TOMA DOMICILIARIA DE POLIETILENO DE ALTA DENSIDAD Y Fo. Go. A UNA DISTANCIA DE 15 M. INCLUYE: EXCAVACION, RELLENO, ABRAZADERA DE P.V.C. 2 1/2" X 3/4", ADAPTADOR DE INSERCION EN BRONCE, ABRAZADERA DEL No. 12, POLIDUCTO DE 3/4" H.D.P., LLAVE DE CUADRO CON ROSCA PARA CONEXION GALVANIZADA, CODOS DE Fo.Go. DE 3/4", TUBO DE Fo.Go. DE 3/4" Y LLAVE DE NARIZ DE 3/4". | PZA | | 1,052.00 | | $1,121.67 | | | $ 1,651,995.58 | | | **23** | **AP030003** | DESCARGA DOMICILIARIA CON 7MTS DE TUBO DE CONCRETO SIMPLE DE 20 CM DE DIAMETRO, JUNTEADO CON MORTERO CEMENTO-ARENA 1:3, CODO Y SLANT, INCLUYE; EXCAVACIÓN A MANO, SUMINISTROS, ACARREOS, RELLENO, MANO DE OBRA Y HERRAMIENTA. | PZA | | 1,052.00 | | $1,376.04 | | | $ 2,026,631.71 | | | **SEÑALAMIENTO** | | | | | | | | | | | | | **24** | **AP060040** | SUMINISTRO Y APLICACION DE PINTURA PARA TRAFICO BASE SOLVENTE COLOR AMARILLO CON MICROESFERAS EN GUARNICIONES DE 35 CM. DE DESARROLLO QUE CUMPLA CON LA NORMA SCT N-CMT-5-01-001/05 INCLUYE: SUMINISTRO DE TODOS LOS MATERIALES, TRAZO, LIMPIEZA Y DESPERDICIOS. MATERIALES, MANO DE OBRA Y HERRAMIENTA. | ML | | 30,156.00 | | $16.64 | | | $ 702,514.18 | | | **25** | **AP200123** | PINTURA DE RAYA CONTINUA DE 10 CM | M | | 14,360.00 | | $6.36 | | | $ 127,861.44 | | | **26** | **AP200100** | LINEA BLANCA DE 30 CM DE ANCHO HECHA A MANO PINTURA TIPO TRANSITO MCA. COMEX COLOR BLANCO.(M6) | M | | 1,400.00 | | $26.51 | | | $ 51,959.60 | | | **27** | **AP020072** | SUMINISTRO, COLOCACION Y PUESTA EN OPERACIÓN DE CRUCERO SEMAFORIZADO PARA VIALIDADES DE HASTA 3 CARRILES DE CIRCULACION VEHICULAR, INCLUYE T.N.C.E. | PZA | | 18.00 | | $408,701.92 | | | $ 10,299,288.38 | | | **28** | **AP200173** | SUMINISTRO, TENDIDO Y COLOCACION DE DUCTO DE P.V.C. DE DOS VIAS DE 10 CM DE DIAMETRO EN CRUCES DE CALLE AHOGADO EN CONCRETO F'c=150 KG/CM2 EN UN ESPESOR DE 30 CM. | M | | 897.50 | | $304.42 | | | $ 382,503.73 | | | **29** | **AP200096** | M-14 FLECHAS PARA REGULAR EL USO DE CARRILES, PARA VELOCIDADES IGUAL O MENORES A 60 km/hora. B) de 500 cm DE LONGITUD, FLECHA DE FRENTE Y VUELTA DERECHA. | PZA | | 216.00 | | $406.30 | | | $ 122,865.12 | | | **30** | AP060006 | RECUBRIMIENTO DE PINTURA DE M-72 RAYAS PARA CRUCE DE PEATONES COLOR AMARILLO | M | | 1,008.00 | | $53.22 | | | $ 92,475.94 | | | **31** | **AP060003** | SEÑAL DE INFORMACION GENERAL SIG-11 DE 0.20 X 61 (FLECHA) | PZA. | | 36.00 | | $467.47 | | | $ 23,560.49 | | | **32** | **AP060036** | SUMINISTRO Y COLOCACION DE SEÑAL DE INFORMATIVA DE IDENTIFICACION SII-14 DE 0.30 X 1.20, INCLUYE: MANO DE OBRA, EQUIPO Y HERRAMIENTA | PZA | | 176.00 | | $798.65 | | | $ 196,787.36 | | | **33** | **AP060031** | SUMINISTRO Y COLOCACION DE PLACAS DE NOMENCLATURA VIAL DE 0.60X0.40 CMS CON DISEÑO SEGUN LO INDIQUE LA DEPENDENCIA, CON UN FONDO DE VINIL REFLEJANTE Y ANTIGRAFITI,INCLUYE: SUMINISTRO, MANO DE OBRA, EQUIPO Y HERRAMIENTA | PZA | | 560.00 | | $1,016.09 | | | $ 796,614.56 | | | **34** | **AP020076** | PINTADO DE MARCAS CANALIZADORAS, DE 20 CM DE ANCHO COLOR AMARILLO. PARA TRAFICO CON REFLEJANTE A BASE DE MICROESFERAS SOBRE PAVIMENTO | M | | 2,880.00 | | $17.30 | | | $ 69,753.60 | | | **35** | **AP200121** | PINTURA DE RAYA DISCONTINUA DE 12 CM | M | | 28,720.00 | | $5.98 | | | $ 240,443.84 | | | **36** | **AP020077** | VIALETAS DE PLASTICO COLOR AMARILLO DE 10X10 CM | PZA | | 2,500.00 | | $59.00 | | | $ 206,500.00 | | | **37** | **AP020078** | BOYAS METALICAS COLOR AMARILLO CON REFLEJANTE | PZA | | 450.00 | | $183.58 | | | $ 115,655.40 | | | **38** | **AP020079** | SUMINISTRO Y COLOCACION DE SEÑALAMIENTO PREVENTIVO, RESTRICTIVO O TURISTICO DE 86X86 CM, CON PELICULA RETROREFLEJANTE DE ALTA INTENSIDAD | PZA | | 140.00 | | $1,487.55 | | | $ 291,559.80 | | | **39** | **AP020083** | SUMINISTRO Y COLOCACIÓN DE SEÑALAMIENTO INFORMATIVO SID-9 ENTRONQUE DE 148X30 CM, CON PELICULA RETROREFLEJANTE DE ALTA INTENSIDAD | PZA | | 18.00 | | $2,430.43 | | | $ 61,246.84 | | | **40** | **AP020080** | SUMINISTRO Y COLOCACIÓN DE SEÑAL TIPO BANDERA, INCLUYE BASE DE CONCRETO | PZA | | 36.00 | | $19,328.05 | | | $ 974,133.72 | | | **41** | **AP020081** | SUMINISTRO Y COLOCACIÓN DE SEÑAL DE PUENTE, TRES TABLEROS | PZA | | 18.00 | | $32,170.72 | | | $ 810,702.14 | | | **GUARNICIONES** | | | | | | | | | | | | | **42** | **AP200184** | GUARNICIONES DE CONCRETO SUMINISTRADO POR PROVEDOR R.N. F´C= 200 KG/CM2 DE SECCION TRAPEZOIDAL DE 15X20X50 CON AGREGADO MAXIMO DE 40.00 MM, INCLUYE: PREPARACION DE LA SUPERFICIE, SUMINISTRO DEL MATERIAL, MANO DE OBRA, EQUIPO, HERRAMIENTA Y CIMBRA | M | | 2,872.00 | | $209.10 | | | $ 840,749.28 | | | **43** | **AP200135** | DEMOLICION A MANO DE CONCRETO SIMPLE EN GUARNICIONES | M3 | | 201.04 | | $244.70 | | | $ 68,872.28 | | | **44** | **AP200003** | ACARREO EN CAMION DE MATERIAL MIXTO. PRIMER KILOMETRO, CARGA MECANICA | M3 | | 201.04 | | $19.08 | | | $ 5,370.18 | | | **45** | **AP200004** | ACARREO EN CAMION DE MATERIAL MIXTO. KILOMETRO SUBSECUENTE, ZONA URBANA | M3/KM | | 3,618.72 | | $3.70 | | | $ 18,744.97 | | | **BANQUETAS** | | | | | | | | | | | | | **46** | **AP020082** | LIMPIA TRAZO Y NIVELACION EN EL AREA DE TRABAJO. | | M2 | 2,154.00 | | $6.36 | | | $ 19,179.22 | | | **47** | AP220003 | DEMOLICION A MANO DE CONCRETO SIMPLE EN FIRMES, PISOS Y BANQUETAS. | | M3 | 215.40 | | $244.70 | | | $ 73,791.73 | | | **48** | **AP210001** | EXCAVACIÒN A MANO EN ZANJA, MATERIAL COMÙN SECO, CUALQUIER ZONA, PROFUNDIDAD DE 0.00 A 2.00 MTS. | | M3 | 215.40 | | $66.73 | | | $ 20,123.10 | | | **49** | **AP020002** | NIVELACION Y COMPACTACION PARA RECIBIR BANQUETA, INCLUYE: MANO DE OBRA, EQUIPO Y HERRAMIENTA. | | M3 | 215.40 | | $24.76 | | | $ 7,466.63 | | | **50** | **AP200003** | ACARREO EN CAMION DE MATERIAL MIXTO. PRIMER KILOMETRO, CARGA MECANICA | | M3 | 215.40 | | $19.08 | | | $ 5,753.76 | | | **51** | **AP200004** | ACARREO EN CAMION DE MATERIAL MIXTO. KILOMETRO SUBSECUENTE, ZONA URBANA | | M3/KM | 3,877.20 | | $3.70 | | | $ 20,083.90 | | | **52** | **AP200164** | FIRME DE CONCRETO HIDRAULICO DE10 CM. DE ESPESOR CON CONCRETO FC=150 KG/CM2., INCLUYE: ELABORACION Y VACIADO DEL CONCRETO, NIVELADO, REGLEADO, ACARREOS, MATERIALES, LIMPIEZA, EXCAVACION, AFINE, CIMBRADO, DECIMBRADO, RELLENO Y EL RETIRO DEL MATERIAL SOBRANTE. | | M2 | 2,154.00 | | $172.03 | | | $ 518,773.67 | | | **53** | **AP200171** | ACABADO CON VOLTEADOR METALICO EN ARISTAS O JUNTAS DE GUARNICIONES, FIRMES, O PISOS DE CONCRETO. | | M | 4,308.00 | | $5.76 | | | $ 34,739.71 | | | **54** | **AP200170** | ACABADO ESCOBILLADO O FINO SOBRE FIRMES O PISOS DE CONCRETOY BANQUETAS | | M2 | 2,154.00 | | $13.47 | | | $ 40,620.13 | | | **55** | **AP020128** | LIMPIEZA GRUESA DE OBRA, INCLUYE BARRIDO, MANO DE OBRA Y HERRAMIENTA, SE PAGARA UNA SOLA VEZ PARA TODA LA OBRA. | | M2 | 174,711.33 | | $4.78 | | | $ 1,169,168.22 | | | **MAXIGAS** | | | | | | | | | | | | | **56** | **AP200218** | REUBICACION DE TUBERIA DE MAXIGAS, INCLUYE: EXCAVACION A MANO ESPECIALIZADA EN ZONAS DE RIEZGO, DEBIDO A LA PRESENCIA DE GAS, REALIZANDO SONDEOS PREVIOS A CADA 20 MTS EN MATERIAL COMUN SECO HASTA 2 MTS DE PROFUNDIDAD, REUBICACION DE LA TUBERIA DE MAXIGAS, RELLENO A 20 CMS DE ESPESOR, COLOCACION DE BANDA PREVENTIVA ANUNCIANDO LA PRESENCIA DE LA TUBERIA Y RELLENO TOTAL DE LA ZEPA | | M3 | 1,238.00 | | $270.50 | | | $ 334,879.00 | | |  |  | **ELABORÓ:** | |  | **Subtotal** | | | | | **$160,896,363.02** | | |  |  |  | |  | **Indirectos 10.01%** | | | | | **$16,105,725.94** | | |  |  |  | **Subtotal** | | | | | **$177,002,088.96** | | |  |  | **NOMBRE Y FIRMA SUPERVISOR** | |  | **Utilidad 9.00%** | | | | | **$15,930,188.01** | | |  |  | **REVISO:** | |  | |  | | --- | | **Subtotal** | | | | | | **$192,932,276.97** | | |  |  |  | |  | **I.V.A. 16%:** | | | | | **$30,869,164.32** | | |  |  |  | **TOTAL** | | | | | **$223,801,441.29** | | |